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KINZIE MILLER—Vice President
V. W. HEINZERLING—Manager News Service

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April 13th, 1945
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Carrington Kung

The oil industry—particularly in California—has had more than its share of trouble recently, with both the executive and the judicial branches of the Government acting in a manner to cause real consternation to those who are trying to comply with the wartime demand to drill more wells and produce more petroleum.

Operators with leases on tidelands properties still are worrying over ominous indications that either the Interior Department or the Department of Justice is ready to question title to the tidelands,—thus discouraging companies which recently have completed plans to produce on new leases and causing those already producing to wonder whether it is worth while to continue while the ownership question is in litigation.

On top of this, the general alarm over the recent decision of the U. S. Fifth Circuit Court of Appeals' disallowing intangible drilling costs in the case of the F.H.E. Oil Co., of Texas, raced through the entire industry, threatening an even greater lay-off among those who could not afford to pay taxes on expenditures incident to drilling new wells, the cost of completing wells that might turn out to be unproductive, or to forego the long-standing allowance for depletion and depreciation of old producers which the Treasury Department has permitted since 1918.

Fortunately for the oil business, Congress has taken a brisk interest in both matters, with emphasis on the fact that any action detrimental to the petroleum production program will have a serious, if not fatal, effect on the smashing Allied offensives both in Europe and against Japan.

Since nothing startlingly new has occurred on tidelands in the past two weeks (see CALIFORNIA OIL WORLD'S 2nd March issue for a resume of the matter). Let's have a look, first, at the complexities raised by the circuit court decision:

On March 6, Gulf States judges, meeting in New Orleans, La., upheld the Commissioner of Internal Revenue in his refusal to allow the deductions referred to above to the F.H.E. Co. and another small Texas oil company, the Fleming-Kimbell Corp. In a previous Tax Court decision on this case, four judges dissented, agreeing with the majority that costs of drilling were capital expenditures, but holding the Treasury Department regulations (in effect for 27 years) "clearly gave the taxpayers the option they claimed".

Spearheaded by the Independent Petroleum Association of America, the industry raised a howl that brought action.

First, it must be pointed out that the full impact of the circuit court decision did not immediately attract attention. At the March 14 meeting of the Petroleum Industry War Council, jittery oil men were discussing the decision in hollow tones. On March 27, Congress sat up and took notice and, two days later, the present Commissioner of Internal Revenue, Joseph D. Nunan, Jr., allayed some of the fears of the producers in a letter declaring the Internal Revenue Bureau proposed to continue following its long-time procedure, granting deductions relating to intangible drilling costs, "notwithstanding" the circuit court decision. . . . The IPAA, meanwhile, had called for the "fullest exertion of the ability of the oil industry" to obtain a correction of the "new handicap that has been placed by the court on the producer of oil."

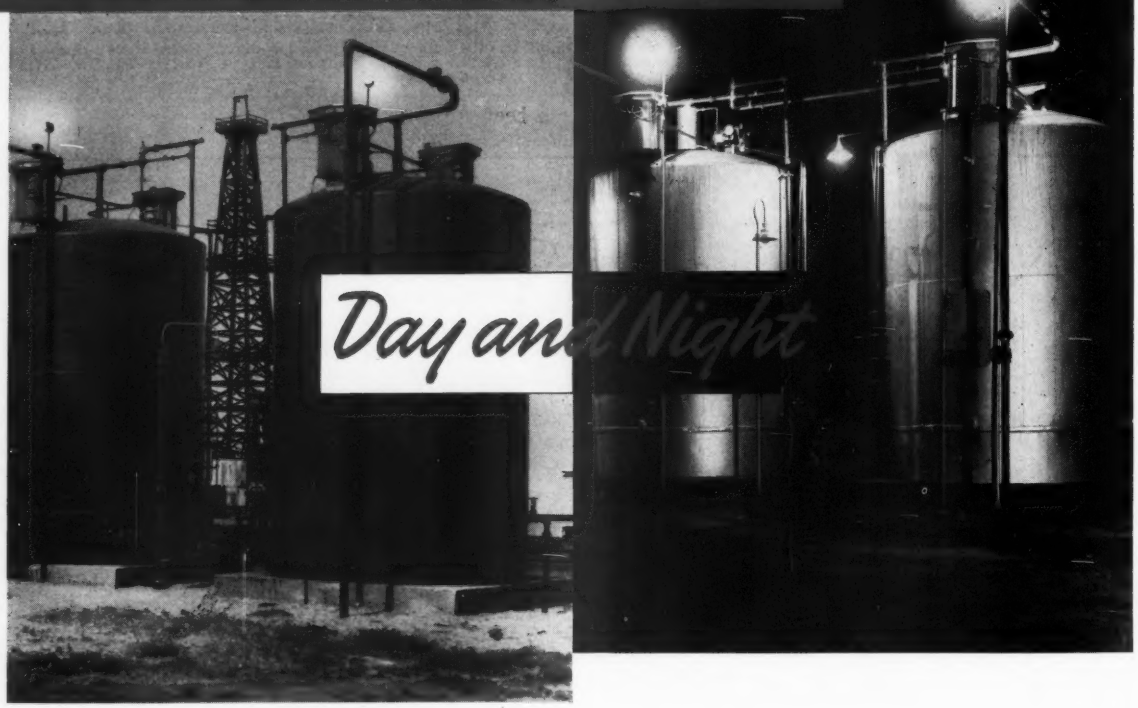
Here is Commissioner Nunan's letter, dated March 29, to Hon. Wesley E. Disney—former oil man-Congressman from Oklahoma—written in response to Disney's request for a clarification of the Treasury Department's attitude. (Disney now is Washington representative for the Western Oil and Gas Association, and worked on the matter in collaboration with the IPAA):

"Dear Mr. Disney:

Receipt is acknowledged of your letter dated March 28, 1945, with reference to the procedure which the Bureau proposes to follow in the application of the regulation relating to intangible drilling and development costs for oil and gas wells.

"The Bureau proposes to continue to follow the provisions of

Petreco GUARDS THE FLOW...



As the pilot light on each Petreco unit burns it informs the operator, or lease pumper, that the oil is being dehydrated to pipe line requirements. He can spot these lights at considerable distances from the Dehydrating plant, as he makes his rounds of the wells. When the light burns brightly he knows that pipe line oil is flowing into the shipping tanks. When the light burns dimly, or flickers, this is a sign that adjustments are needed.

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Section 29.23 (m)-16 of Regulations 111, and corresponding provisions of prior regulations notwithstanding decision in case of F. H. E. Oil Company. In the event of a clarification of the law impelling such a change, in no event would such a change be retroactive unless so directed by Congress.

"You may make my answer pulic.

Very truly yours,
(sgd.) Joseph D. Nunan, Jr.
Commissioner."

Assurance that no change in the regulation would be made retroactive without Congressional action was, perhaps, the biggest morale-booster in Nunan's letter. While oil men were no end comforted by the news the Internal Revenue Bureau would continue to follow the policy of allowing deductions, there remains the fear of what would happen if the circuit court's decision should be upheld by the U. S. Supreme Court.

Another fear is that Congress will not act forcefully and quickly on a matter imperilling the oil industry. But this fear seems unjustified as four bills, amending the Internal Revenue code to make the disputed regulation a part of the basic tax law, already have been introduced and several House members have denounced the circuit court decision as a menace to the war production program.

Important is the fact that two of the bills were introduced by members of the powerful House Ways and Means Committee which, in 1942, heard the oil industry's case against the Treasury Department (it was voted to recommend no change in the law, at that time),—Representatives Frank Carlson of Kansas and Daniel A. Reed, of New York. The legislation will be considered by Ways and Means. . . . Two California members on the committee are Bertrand W. Gearhart (R.), of Fresno, and Cecil R. King (D.), of Los Angeles.

The riddle of Nunan's seemingly sympathetic assurance to Wes Disney attracted much interest in Washington. Here is what the Louisiana decision had to say on the Treasury Department's attitude, but it must be kept in mind that the F.H.E. case (involving income taxes for the years 1939-40) first came up when former Commissioner Guy T. Helvering was in charge:

"The legislative mind of the Treasury Department seems determined to maintain the option. The administrative mind, represented by the Commissioner (Helvering) and his lawyers, and supported generally by the courts, is bent on whittling it away. The question of its validity has seldom been raised, the taxpayers not wishing to attack it because it favors them, and the Commissioner not being in position to repudiate the regulation of his own department. The judges have not thought it their business to raise the question; but if the option be in truth contrary to the revenue statutes, it is void, and it is the duty of the judges to declare and uphold the law, and disregard the regulation."

To become really technical, the court stated F.H.E. had been allowed to deduct drilling costs as expense and "no one questioned the propriety of the deduction."

"The controversy," said the court, "was over another part of the Regulation which required that such an expense deduction would apply in ascertaining the 50 percent of net income to which the statute limited the (27½ percent) percentage deduction for depletion. That part of the regulation was upheld as an interpretation of the depletion statute, and resolving an ambiguity in it as to the meaning of net income. No opinion was asked or expressed as to the validity of the expense option."

. . . Meanwhile oil and gas associations throughout the country are calling meetings to map out a program safeguarding their long-time privilege of deducting from current income the various expenditures involved in the highly-speculative business of drilling for oil. Congress's interest has been encouraging, and the boys are grateful for the Internal Revenue Bureau's apparent willingness to continue doing business in the same old way. But too many hammer-blows have fallen on the oil industry in recent weeks to give anybody any real confidence that the Government is not maneuvering them into a position where a lot of oil men, and oil companies, will find themselves behind the 8-ball,—or "77-B".

With many members of Congress out of town during the semi-official Easter holiday, and special Assistant Attorney General William W. Clary and his associates back in California, Washington interest in the tidelands fight has subsided momentarily.

This is not to say that an extensive drive to pave the way for hearings on quitclaim resolutions in both House and Senate is not continuing. Nor would it be safe to predict there will be no new developments during the Congressional slack season.

Secretary of Interior Ickes has not yet granted those applications for drilling privileges in the Long Beach-Seal Beach area—the action that was to have been the opening gun in the Federal Government's fight to wrest title to the tidelands from the several states.

This stall on the part of the Secretary has given rise to numerous rumors—all of them, so far, unsubstantiated. Some people say that Ickes has lost his nerve, but veteran observers of the Ickes mode of operation believe this unlikely. More plausible is the report that Ickes has agreed to put aside the idea of attacking title to the tidelands through precipitating a court fight over the leases and has agreed to let the Department of Justice step in with an original suit against the State of California.

For those who like to read politics into the matter, a report is going the rounds that Speaker Sam Rayburn, of Texas, prevailed upon Ickes to drop the issue. Still another rumor is that a "deal" has been suggested through which Ickes would agree to "forget" his promise to grant the leases if Congress will pigeon-hole the resolutions that have been pouring in to permanently vest title to the disputed lands in the several States.

There is still a suspicion that the Justice Department is preparing a suit directed at California, originating in the United States Supreme Court and declaring title to California's tidelands is in the Federal

3 Years of War . . . Yet We Eat Steak!

In this fourth war-year, we all eat steak—sometimes. Our warriors eat meat often. So why not give a salute to good "Bill Cleaver," the corner butcher, as we struggle to make our meat-stamps and his inventory come to terms?

Before the war, your butcher — along with the nation's other "Bill Cleavers"—was among the country's biggest employers. The packers worked for him. The railroads ran those long sheep and cattle and hog trains for him. The livestock industry was on his payroll.

That's why each of our 12 million service men gets roughly one pound of meat — every day. That's why we home-folks eat meat—most days. That's why the meat people —on farm and ranch, in stock yards and packing houses — could crash through with a "miracle."

Once a multitude was fed miraculously with 12 small fishes. This modern "miracle" involves such items as four billion *more* pounds of meat in a single year. It means a war-year production 29.7 per cent above a 10-year average — despite every war-time handicap.

It means a meat supply so big that, after 17 per cent goes to our own Fighting Joes, some is left over. After another 12 per cent feeds the fighting men of our allies, some is left over. After a further 4 per cent is put in reserve, the remaining 67 per cent is enough to sustain a population that now works harder and gets hungrier.

And don't forget about morale. Americans are meat-eaters. Without meat, most of us would feel we were starving to death—even amid meatless plenty. So let's say "Thank you" to the wonder-working meat industry that stands behind "Bill Cleaver," the corner butcher.

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STANDARD OF CALIFORNIA

Government. There are still those, however, who insist Attorney General Francis Biddle is definitely against such an action.

The Justice Department has been oddly reticent on the subject of tidelands over a period of several years. Since revival of the issue, in 1945, numerous requests have been made of Biddle for a report, or opinion, on tidelands, without results. The subcommittee of the Senate Judiciary Committee—which expects to start hearings on the McCarran tidelands resolution this spring, or summer—has not yet received a reply to its request for a report; the Interior Department claims to be in the dark over Justice's views on the matter and private individuals have been unsuccessful in extracting the coveted information from Justice Department officials.

A statement of policy may be forthcoming shortly, however. Representative Clyde Doyle, new Democratic Congressman from Long Beach, told CALIFORNIA OIL WORLD he intended not only to seek another interview with Secretary Ickes on the mysterious delay in granting the applications but also would try for an appointment with Atty. Gen. Biddle. The California Congressman precipitated the entire tidelands embroglio by pouncing on "Honest Harold" two months ago and extracting the information that Ickes was planning to test California's ownership position in the courts.

Doyle, at present, is lining up more members (principally from the East and the Mid-West) to swell the number of resolutions demanding the U. S. quitclaim all rights and title to the tidelands and to lands lying under navigable waters. At last count, there were 14 of these measures before the House Judiciary Committee, plus the McCarran resolution in the Senate . . . Four Californians — Reps. Doyle, John H. Tolan, of Oakland; Ellis E. Patterson, of Los Angeles; and Franck R. Havenner, of San Francisco, all Democrats—have so far contributed to the growing list of sponsors, which includes numerous Republicans and representatives of states with no oil interests or salt water ports.

The above-mentioned suggestion of a "deal," through which the Congressional faction pressing for legislation to permanently establish title in the States would call off the dogs if Ickes would disappoint his California applicants, met with a resounding "No."

"People will be willing to go to bat for the legislation—win all, or lose all," predicted Representative Cecil R. King (D., of Los Angeles), in a statement complimenting the Californians sponsoring tidelands legislation for "taking up the cudgels" in the fight. Representative Richard J. Welch (R., of San Francisco), who plans to put in a resolution as soon as the House ends its present informal recess, expressed a wish to "get it over with, once and for all." Otherwise, Welch said, Ickes will continue his habit of "flaring up once in a while" and causing unrest among those with tidelands leases.

Meanwhile, Assistant Atty. Gen. Clary is conferring with Gov. Warren, Atty. Gen. Robert W. Kenny and other California State officials and rounding up what Washington believes will be an impressive roster of "States' rights" advocates throughout the country. The Californians are hoping for the signatures of at least 30 States' Attorneys General on a California-written brief which will be introduced at the hearings—maybe more.

What is the outlook for U. S. manufacturers of refining equipment in a postwar and pre-postwar world where installations have been shattered by Allied and enemy bombs, or destroyed by the enemy when re-capture looks inevitable?

With manpower and materials at a premium in this country there will be little likelihood until after the war of any expanding market abroad. But V-E day should bring an acceleration of production in this country and—by the time final peace is declared—U. S. manufacturers should be in a position to fill a flood of orders flowing in from Russia, the Middle-East, the liberated countries of Europe and our nearer neighbors — Mexico, Venezuela and other Latin American oil-producing countries.

Sooner than would have been believed possible, some months ago, American ingenuity will be called upon to rebuild the refineries in the Netherlands East Indies — a day which has been looked forward to by our military and Government officials with high expectation. Reconstruction of the refineries in Sarawak and Balikpapan, in Borneo, and Palembang and other great oil centers in Sumatra, will permit the Allies forces to draw supplies of gasoline and fuel oils from the Far Pacific for the invasion of China, or the Japanese homeland, with a saving of thousands of shipping miles and millions of dollars.

Government sources, quite naturally, have little to say about plans for the rehabilitation and reconstruction of the world's war-battered refining centers or the prospects for new construction in foreign countries. But it's a safe bet the demand for American equipment will keep the manufacturers working at top speed when the war is won.

Multiple headaches will occur, of course, while the liberated countries and their Allied rescuers are trying to resolve grave problems of provisional and permanent government; while questions of currency and credit remain unsolved, and during the period of readjustment when Allied commissions will be battling to restore order.

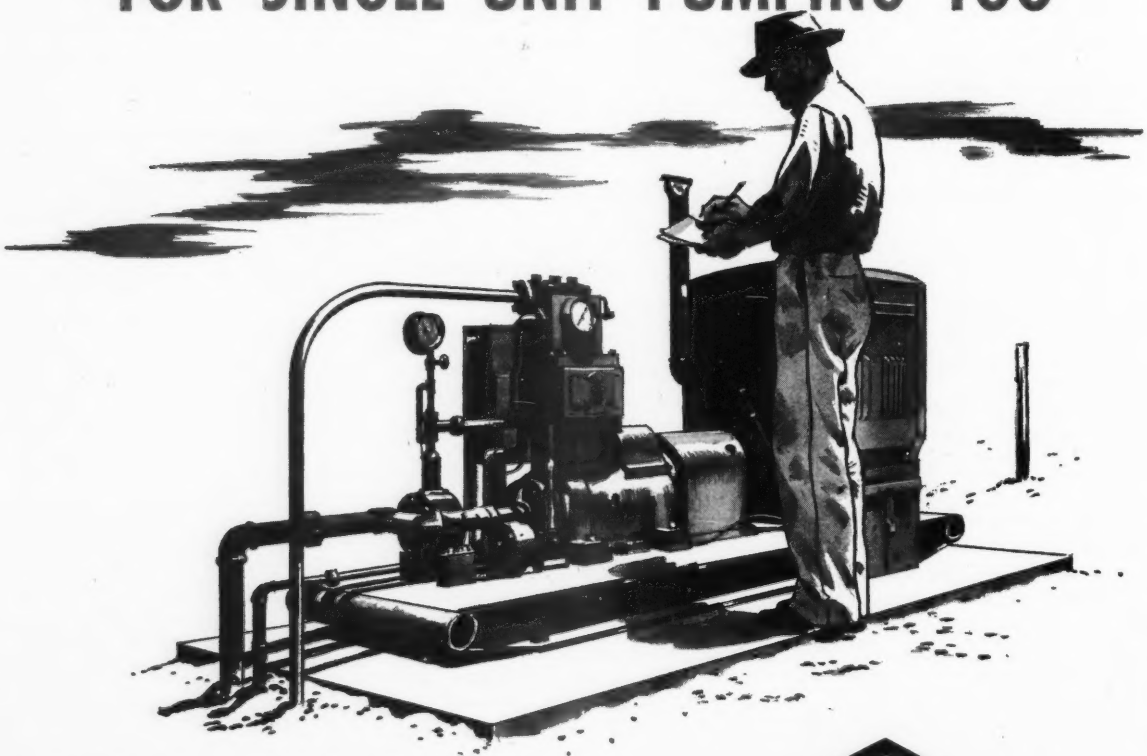
Russia's needs remain an enigma. Some industry experts feel that the Soviet Union will be unable to pull itself up by the boot-straps—with regard to establishing a great, postwar refining industry — without "Made in America" equipment; others believe Russia will prefer to set up its own machine tool industry and build its own refining equipment.

Countries with "cash on the barrel-head" for immediate postwar construction probably will be Mexico and the other Latin American oil-producing countries, plus the Middle-East.

At all events, prospects for American equipment look rosy—when taken with the proper respect for the violent upheaval that will occur while the postwar readjustment is taking place.

Right

FOR SINGLE UNIT PUMPING TOO



MORE and more single well operators are finding that they, too, can have the efficiency, flexibility and portability of Kobe "fluid power" pumping—not only for the same cost but in almost every case at a considerable saving. This applies both on original outlay and operating costs.

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PORTABILITY. Because of its compactness and light weight, Kobe is more readily movable than any other oil pumping equipment now in use. Should pumping conditions change and the need arise to substitute one Kobe unit for another of smaller or larger capacity, the exchange can be made in a few hours with regular lease trucks.

Any one of these advantages would be sufficient reason for preferring Kobe. Taken together, they make it the only logical choice if you want savings with satisfaction.

No matter what your single well problem may be, your nearest Kobe representative has the solution. Call him today.

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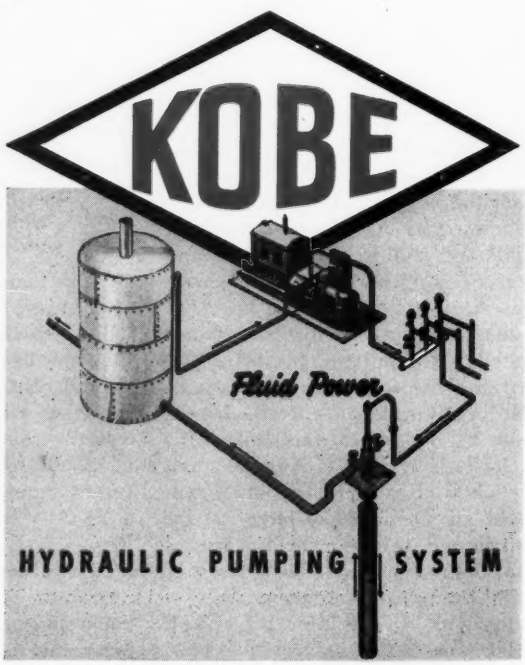


A. P. I. Pacific Coast War Time Conference Successful

The Pacific Coast District of the A.P.I. Division of Production held an outstandingly successful War Time Conference at the Los Angeles Biltmore Hotel on March 29.

Six hundred Southern California oil men attended the day meeting. One thousand were in attendance during the evening session to hear addresses by William R. Boyd, Jr., A.P.I. President and Chairman of the Petroleum Industry War Council; and Ralph K. Davies, Deputy Petroleum Administrator, Washington, D. C.

Presiding Chairmen

George Suman, chairman of the Pacific Coast District A.P.I. Division of Production was presiding chairman during the evening. The morning technical session was presided over by Bruce H. Robinson, Gen. Pet. Corp., Prof. John F. Dodge, U.S.C., presided over the afternoon session.

Boyd Lauds Oil Industry War Effort

In his address William R. Boyd, Jr. praised the tireless efforts of drillers and producers in supplying refiners with the petroleum needed for the manufacture of fuels, lubricants and synthetic rubber.

Reviewing the steady growth of petroleum as a critical necessity to world commerce and military requirements, he recalled the day in 1899 when the War Department bought three automobiles and ordered extra attachments to the "horseless carriages" so that mules could pull them if they broke down. From 1900 to 1942, when the manufacture of automobiles was halted by the war, the American automobile industry had turned out 69,000,000 cars with a total wholesale value of $44,000,000,000, he explained.

Chemical Synthesis Plays Vital Role

"The science of hydrocarbon chemistry", Mr. Boyd said, "has already grown rapidly and its ultimate place in our lives is beyond the comprehension of any of us". This indicates the growth of new industries after the war which will create chemical wonders from a barrel of oil. "Who would have suspected", he said, "that by 1945 synthetic rubber, derived to a great extent from petroleum, would exceed a production of more than a million tons yearly?"

Future of Oil Demands Individual Enterprise

To reap the benefits from petroleum in the years ahead, the speaker explained, the way must be cleared and kept clear to produce it, to process it, to transport it and to distribute it. The way must be kept cleared for individual enterprise, individual achievement and individual reward. If the world wants petroleum, artificial barriers must not be created by governments to prevent men from seeking it wherever it may be found, and from profiting from their discoveries.

Mr. Boyd concluded with the statement that he believes that our 1950 civilian and military consumption of petroleum will exceed that consumed in 1945. The oil will be available, he believes, if everyone appreciates the importance of gasoline, fuel oil, and other petroleum products enough to insist that the petroleum industry be given the green light to conduct its vast responsibilities.

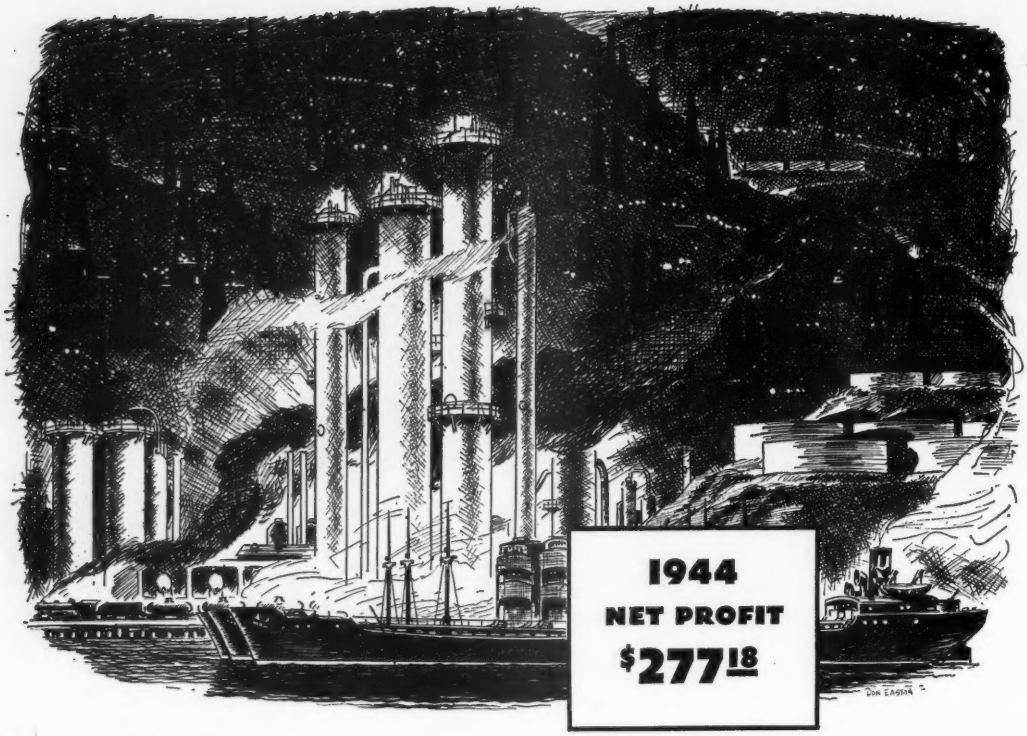
Davies Discusses War Oil Supply Problems

From peacetime overproduction of oil to wartime shortages has been the lot of the U.S. oil industry, according to Ralph K. Davies. Oil production at full capacity now falls short of meeting the demand. Stocks have been drawn down to bare working levels. Never before has the oil industry been called upon to absorb such a shock as the war has imposed.

United Nations Oil Requirements Enormous

The world-wide requirement of the United Nations today, the speaker explained, exceeds 7,000,000 barrels of oil per day. Of this, the United States is called upon for 5,150,000 barrels or 69 percent; the countries of the Middle East 7 percent and Russia 9 percent. In the U. S. the current rate of production exceeds even the maximum efficient rate for fields by some 200,000 barrels per day; a condition only justified by the national emergency.

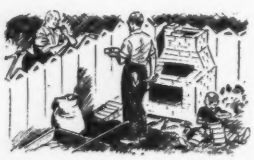
Wm. R. Boyd, Jr.



1 **Figures can be deceiving.** In the financial news of last month, Union Oil's 1944 net profits were listed at $8,932,994. Now that's a lot of money. But what the figures fail to reveal is that this money was divided among *a lot of people.*

2 **For Union Oil Company** is owned not by one man or two, but by 32,227 individual Americans. Divided among that many owners, the net profits averaged just $277.18 per stockholder. Even this sum wasn't all paid out in dividends. $4,266,724 of the net profits were plowed back into the business.

3 **So dividends** paid out averaged just $144.79 per stockholder. In contrast to this, the wages and salaries averaged $3298.77 per Union Oil employee for the year. Even government received more from Union Oil's operation than the stockholders. $4,666,270 were paid out in dividends, $6,127,200 in taxes.



4 **This is not** pointed out as a complaint, but rather to show you that while Union Oil today consists of about 169 million dollars' worth of buildings, oil wells, refineries, ships, etc., it is owned by ordinary Americans like you and your neighbor next door.

5 **These owners** live in all parts of the country – 516 in Oregon, 801 in Washington, 706 in Illinois, etc. 341 are in the military services. 2913 are Union Oil employees. The average stockholder owns 145 shares. Some hold less, some more; but the largest owns less than 1½% of total shares outstanding.

6 **So it is not** the investments of a few millionaires, but the combined savings of thousands of average citizens, that make corporations like Union Oil possible. And without some such method of financing industry, American mass production, with free competition, could never have been achieved.

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Those desiring more complete information on the material in this advertisement may refer to the formal Annual Report to Stockholders and Employees which we will gladly furnish on request. We would also appreciate any comments or suggestions. Write: The President, Union Oil Company, Union Oil Building, Los Angeles 14, California.

California Oil Production 44 Percent over Pre-war Level

California is asked to produce during April 918,800 barrels of crude per day; 58,560 barrels of natural gasoline and condensate; a total of 977,360 barrels of petroleum liquids, Mr. Davies stated. This is an enormous production and represents an increase of almost 44 percent over the pre-war level for California fields. By comparison the national rate is but 26 percent over pre-war, so California is entitled to special honors.

California Supplies 42 Percent of Pacific War Oil Requirements

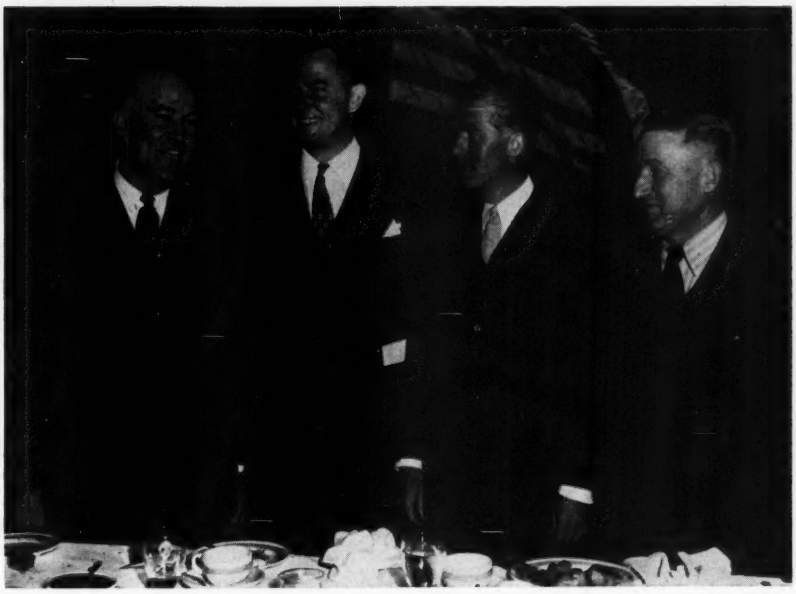
Mr. Davies revealed that the California industry, in spite of operating on an unprecedented wartime scale, supplies only 42 percent of the total requirement of the Pacific Theatre. Today 28 percent is coming from the Carribean, 14 percent from inland U. S. and the Gulf, 2 percent from Peru and 14 percent from the Persian Gulf. One hundred and forty thousand barrels of oil from Texas and the Mid-Continent are being shipped daily to California.

International Oil Agreement Vital Part of Future

Speaking of post-war problems in petroleum exploration and production by the various nations, Mr. Davies pointed out that just as isolationism has proved fallacious, so in respect of oil isolationism is a wholly untenable theory. Oil, he stated, is predominantly international in character. The vast deposits of oil in the Middle-East—probably approaching in size those of the U. S.—and the resources of South America and other principal oil areas, will in post-war commerce have much to do with shaping California's future, he said. The idea of an International Oil agreement, he said, springs from a recognition of the fact that in the modern world oil is indispensible in peace as it is in war.

California No Longer An Isolated Oil Country

Mr. Davies advised California oil men to actively interest themselves in international oil questions. The day is passed, he stated, when the Sierra Nevada range and the waters of the Pacific are sufficient to protect California's oil economy from the effects of disorder in the other principal oil sources of the world.



Ernie Pyles, Carlton Beal, Ralph K. Davies and Geo. O. Suman.

Gas Lift Performance Through Small Tubing

A. C. Tutschulte, Tide Water Associated Oil Co., presented the results of a study of gas lift performance through 1½-inch macaroni tubing. Basic well characteristics considered were: 1) static formation pressure, 2) productivity index, 3) formation gas-oil ratio, 4) depth of well, 5) viscosity and gravity of oil, and 6) water content.

Factors affecting intermittent gas lift testing, the effect of the frequency of the gas injection period, and the effect of rate of injection were discussed. Some data were also presented on continuous gas lift.

Summary of Results

In summarizing the results of the investigation the author emphasized that well performance characteristics, particularly static formation pressure, productivity index, and formation gas-oil ratio should be fully determined when the application of gas lift through small tubing is considered.

The factors that affect intermittent gas lift performance have been developed and are illustrated graphically by the author. Through the use of charts, and provided that the well characteristics are known, it should be possible to predict the performance to be obtained by gas lift through 1½ inch tubing.

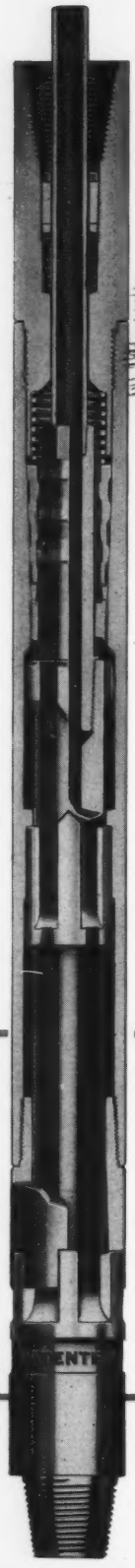
It was further concluded that it should be possible in many cases to effect considerable savings in the quantities of gas used with resultant reduction in operating costs if careful and complete testing of gas lift wells is conducted and proper analysis is made of the factors concerning the applicatoin of gas lift through macaroni tubing.

Standard Oil Co. Drills 16,246-ft. Well

Omar A. Cavins, Standard Oil Co. of California, described the drilling of the 16,246 foot hole at the KCL-20 No. 13 well which was made with surface equipment originally planned to carry the hole to approximately 9500 feet. The well was spudded July 31, 1943 and completed December 27, 1944. Actual drilling time was 516 days . The well was abandoned when an electric log showed that the hole had penetrated beyond reasonable possibilities of the existence of oil.

Experienced Gained

The principal experience gained, the author explained, was that with modern deep drilling equipment, modern practices, competent personnel, supervision and technical control, the drilling of wells in the



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Fishing jobs today have to be fast, economical **and successful.** If you're salvaging older casing for re-use, pulling liners for repair or for redrilling the well, or fishing for valuable drill pipe lost in the hole, you can't take chances on getting into trouble. **You need positive, fast-acting, dependable tools for every job!**

For this work, you can't beat the combination of a Bowen Rotary Releasing Spear on a Bowen Rotary Jar for the dependability you want. They're both so simple to use . . . so positive in operation . . . so rugged and safe . . . that no fishing job you attempt should be without their extra margin of protection.

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for fishing is a **straight-pull** jar—requires no harmful torque in the fishing string for operation . . . thus cannot accidentally release the fishing tools below it. As many as **ten blows per minute** can be struck easily—a feature that can materially shorten the time consumed. And after each blow, resetting is simply a matter of straight lowering of the run-in string. Moreover, the tonnage pull required to trip the jar is adjustable **at the surface,** permitting complete control of the jarring force at all times, regardless of depth.

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has just six simple parts . . . no delicate mechanisms to go haywire at the wrong time. It's set by a simple lowering of the string and a fractional turn to the left, then upward pull. That gives a full-length, positive grip inside the fish that'll **never** let go under the hardest jarring until you want it to! Yet release is so positive that it has never been known to fail even under the toughest conditions. And you can set and release this Spear up or down the well **without coming out of the hole!**

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Tertiary of California to depths of 3 miles and more can be done with good prospects of success.

One improvement to be recommended for another deep exploratory well would be a larger conductor string, say 9⅝ inch to 10,000 feet and a larger hole, probably 8⅝ inch to 14,000 feet with 4½ inch drill pipe and the remainder of the hole 7⅝ inch with 4½ inch and a 3½ inch drill pipe. This would permit better mud circulation, and reduce drill pipe wear which was considerable on the 3½ inch used on KCL-20 No. 13.

Mud Properties and Lithology

The input mud weight after setting 11¾ inch casing was 75 lbs. per cu. ft. This weight was gradually raised until it was 98 lbs. at the conclusion of drilling. Pyrophosphate and quebracho were used for chemical treatment. The maximum mud temperature at the overflow was 135°F. The quality of the mud (weighted Roger's Lake clay) was not affected by the high temperature, but it was continuously circulated over a mud ladder to cool, and remove the small amount of gas.

Core samples showed a marked change in rock density at 15,800 feet. At this approximate depth the bulk density jumped to slightly over 2.6. Porosities dropped from 3.4% and 2.3% at 15,539 ft. and 15,651 ft. in shales to 1.03% and 0.29% at 15,981 ft. and 16,166 ft. These figures approach those of slate which averages 2.65 bulk density and 1.0% porosity.

U. S. Crude Supply and Reserves

Ralph J. Schilthuis, Asst. Dir. Prod. Div. P.A.W., revealed some pertinent statistics on proved crude oil reserves and crude oil production capacity in the U. S. He stated that world production of crude oil for 1944 was 6,887,000 bbls./day. The United States produced 67% of this amount, South America 14%, Russia 12%, and the Middle East 6%.

Proved Crude Oil Reserves

At present the proved crude oil reserves of the world are 50 billion barrels, the speaker stated. Of this figure the U.S. has 20 billion barrels or 39% of the world total. The bulk of these reserves lie in the Southwest, with California harboring most of the rest.

B. P. Kantzer, Carl Young, W. F. Goertz and Paul Andrews.

Of the remainder the Middle East is known to hold 31% with 16 billion barrels, South America 13% and Russia 11%. The Middle East reserves are expected to increase.

U.S. Crude Oil Productive Capacity

In 1941, the year of Pearl Harbor, the U.S. oil industry was producing about 3,700,000 bbls. of crude oil per day. In 1942 the production had increased to about 4,700,000 barrels daily. The million-bbl.-a-day increase, the speaker asserted, represented the industry's reserve production capacity.

At present, he explained, war oil requirements have necessitated the lifting of oil to the surface at 200,000 barrels a day in excess of our maximum efficient production rate. In addition, 150,000 to 160,000 barrels a day of crude oil is being imported.

If all drilling, he said, were stopped at the end of 1944 our maximum productive capacity would drop almost 1,000,000 barrels daily by the end of 1945.

Field Testing of Drilling Fluids

Vernon B. Zacher, Tide Water Associated Oil Co., presented a paper dealing with improvements in the field testing of drilling fluids.

Testing Mud Filtrates

A chemical testing kit was described which provides equipment and reagents for determining the presence of calcium and other ions in the water phase of drilling fluids. This type of testing is viewed by the author as important because the quality of mud is dependent upon the soluble salts present in the mixing water, the mud-making clay, formation waters and the formations drilled.

Tests for Filter Cake, pH and Sand Content

A new filter press is described which was designed for rough use around a drilling rig. It is described as being portable, light in weight, fast in operation and easy to repair.

In testing for hydrogen ion concentration ("pH") the use of a paper indicator is suggested. Instruments can be used when greater accuracy is described.

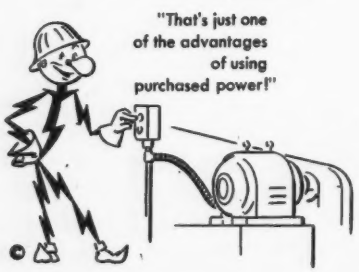
A rapid test for determining the sand content of mud is described. A sand content slide rule and alignment chart are also shown.

The arrangement of a portable field laboratory is discussed and forms for reporting well test data and the evaluation of mud-making clays are illustrated.

What to Do With Mud Troubles

Suggested remedial steps are offered which cover a wide variety of

electric pumping is dependable



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mud troubles. High temperature muds, excessive colloidal material, hole contamination, hole sloughing, sand, bottom-hole dewatering and lost circulation are listed with practical hints.

Remedies for mud contamination by calcium, magnesium, sulphates, cement, and salt are suggested. Shale - running, gas - cutting and chemical overtreatment are also considered.

Oil Well Casing Failures

R. J. Kettenburg and F. R. Schmieder, Shell Oil Co., presented a paper dealing with the fact that recent casing failures in the Ventura Avenue and Paloma fields have been the cause of deep concern to operators in California and hydrostatic tests made in the field show that present API standards do not assure adequate joint and bursting strength to meet deep well requirements.

Manufacturers were called upon to assist in making a series of pressure tests on new casing on field pipe racks in an effort to find a solution for the failures. Low leak resistance of T & C joints uncovered in these tests was the topic of discussion before the California API Drilling Practice Committee and the California District Sub-committee on the standardization of Oil Country Tubular Goods.

Research on Pipe and Joint Strength Needed

The study has led to the following recommendations:

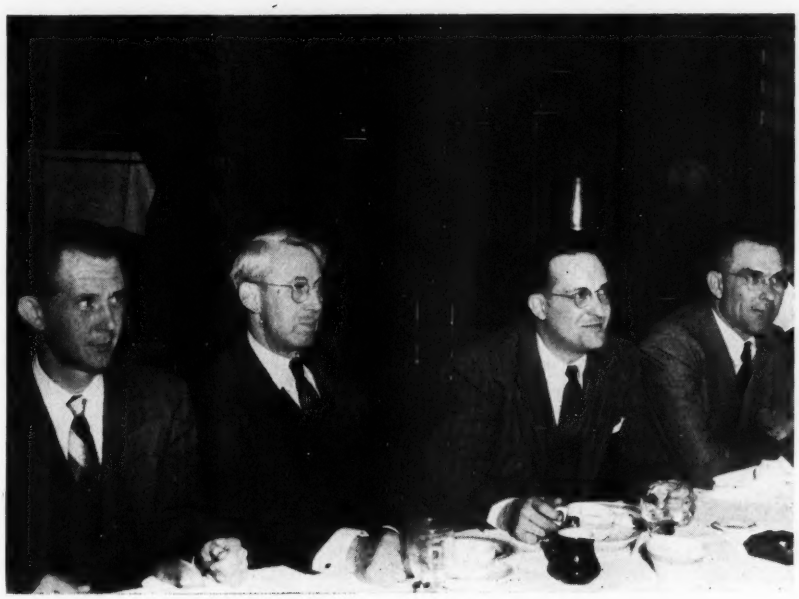
Manufacturers and users should get together and carry out a research program to determine the necessary standards to assure joint tightness, joint strength, bursting strength and collapse of API casing under well conditions. Important factors in the problem are: 1) amount of joint makeup; 2) method of makeup in the mill and field; 3) type of lubricant; 4) well pressure to be encountered; 5) combination of internal pressure and joint tension under well conditions; 6) comparative merits of T & C and integral joint casing; and 7) notch sensitivity.

Pipe Collars, Casing Tongs, Differential Pressures

The practice of using J-55 collars with N-80 pipe should be discontinued until conclusive evidence is presented that joint efficiency will be maintained.

An effort should be made to induce manufacturers to make casing tongs which will cause a minimum of damage to casing.

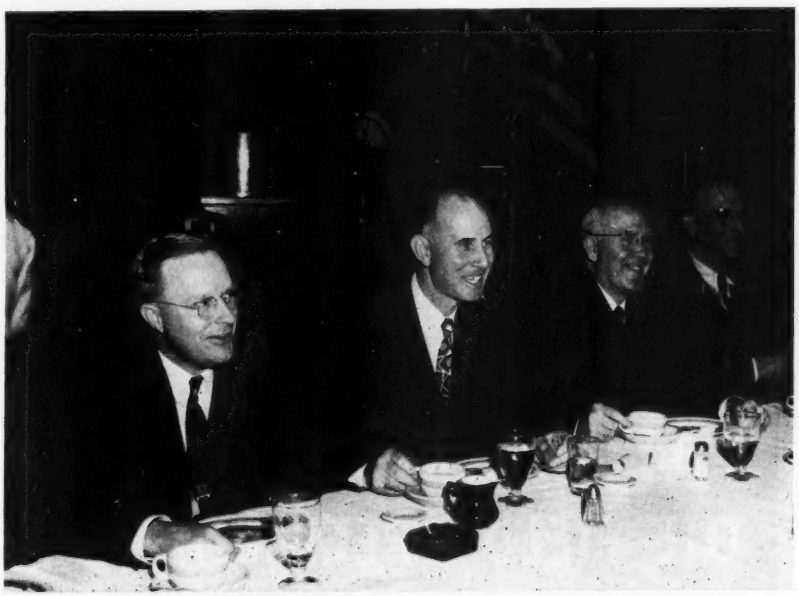
Operators should design their casing strings to withstand maximum differential pressures encountered in drilling and producing without going beyond the minimum yield strength of the metal; and care should be exercised in testing the casing so that the pressures are kept within these limits.



Carl Tutschulte, Omar Cavins, N. van Wingen and Les Johnson.

Reservoir Fluid Flow Research

Norris Johnston, Gen. Pet. Corp., and N. van Wingen, Richfield Oil Corp., presented a paper reviewing the literature pertaining to the flow of fluids in reservoirs, and suggested experiments which remain to be performed before a reasonably com-



Paul Lehr, Loyde H. Metzner, Dave S. Kilgour and Wm. Corey.

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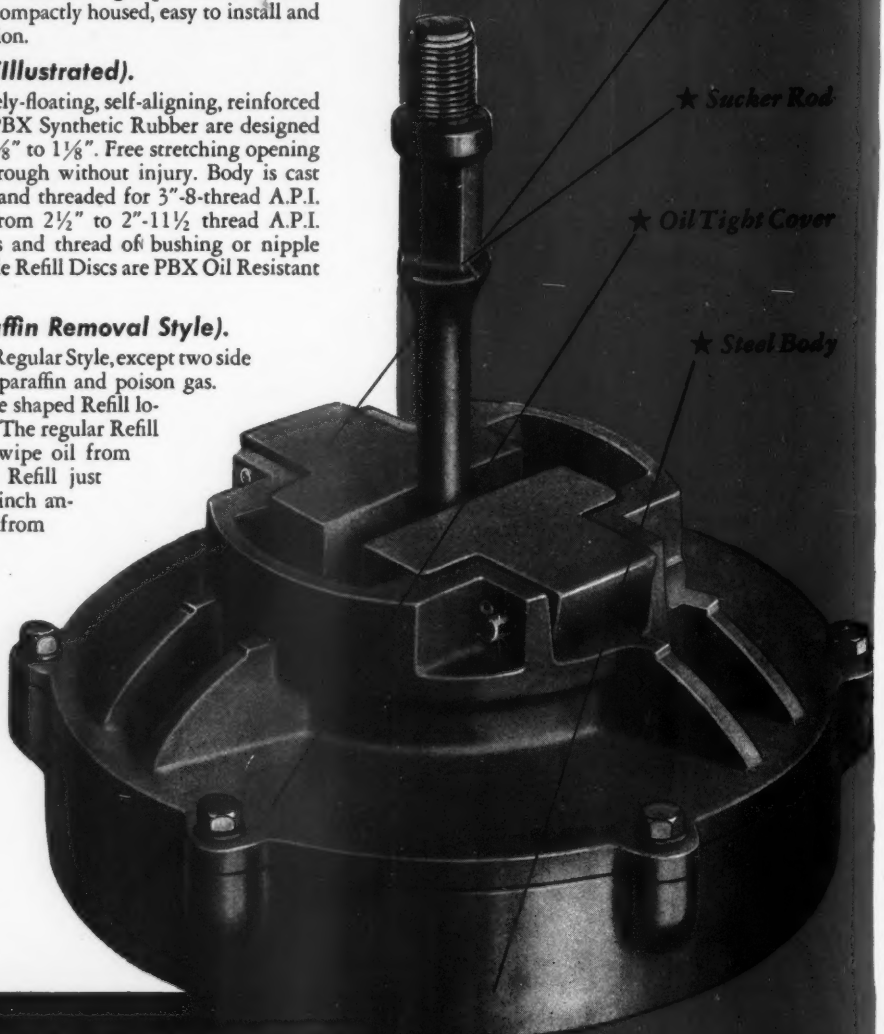
THE UNIVERSAL TYPE *(Illustrated).*

SPECIFICATIONS: Two freely-floating, self-aligning, reinforced discs of tough, wear-resisting PBX Synthetic Rubber are designed to handle all sizes of rod from ⅝" to 1⅛". Free stretching opening permits pump to be pulled through without injury. Body is cast steel, fitted with safety device, and threaded for 3"-8-thread A.P.I. line pipe. Bushing 2½" and from 2½" to 2"-11½ thread A.P.I. line pipe included. Other sizes and thread of bushing or nipple fitting also available. Replaceable Refill Discs are PBX Oil Resistant Synthetic Rubber.

UNIVERSAL TYPE *(Paraffin Removal Style).*

SPECIFICATIONS: Same as Regular Style, except two side outlets for discharge of excess paraffin and poison gas. Paraffin removed by special cone shaped Refill located at junction of two outlets. The regular Refill Discs (as in Standard Style) wipe oil from rods and special cone shaped Refill just above junction of lower three-inch angular outlets prevents paraffin from dripping back into well.

See Composite Catalog



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plete understanding of reservoir behavior may be had.

Future Flow Research

The authors showed that many concepts about oil and gas reservoirs have been definitely established, but much remains to be done. In conducting future experimental work the authors believe that investigators should keep the following in mind.

Only reservoir sands or comparable materials should be used. Interstitial water should be used in all experiments involving water-wet sands. In problems involving a gas phase, the gas should be soluble in the oil to be produced rather than in the interstitial water.

Refined Oils May Be Used

Refined oils may be used to avoid the gradual change of properties with time as will occur generally with crude oils, but all basic crude oil properties should be well duplicated.

Leakage of fluids along the outer surface of the sand sample should be avoided in the case of loose sands as well as of consolidated samples. Experiments should be so arranged as to avoid end effect, or so that results can be so analyzed as to eliminate end effect.

Permeabilities and Flow Rates

Permeabilities should be kept within the range of values found in reservoirs of the type being studied. This will generally involve permeabilities within the range 1 to 20,000 millidarcys, with emphasis on the range 10 to 3000 md.

Flow rates and pressure gradients should be kept within practical limits; and the applicability of electrical analogy experiments should be considered for all but the simplest flow tests.

Experimental Answers Desired

The authors suggest that it would be useful to know final saturations obtained by forcing oil into water-saturated sand, as an aid to other laboratory flow work, since most of such work must be done on artificially saturated sands.

Relative permeability is the most important topic in flow research. Some of the most extensive work was limited to a narrow range of rather high permeabilities. Extension of the work to cover lower permeabilities is highly pertinent.

W. W. Kreiger, J. P. Shea, Lot Bowen, E. V. Watts and T. H. Wallace.

Basic knowledge about recovery factors (residual saturations) is the most important result to be derived from flow research and is not as thoroughly understood as it should be.

Core Analysis and Recovery of Liquid Condensates

The authors believe it desirable to extend flow research to include methods of estimating probable interstitial water. This would greatly benefit core analysis interpretation.

The recovery of liquid condensate from sand is cited as one of the important flow problems that is entirely unsolved.

Multi-Zone Wells in Wilmington Field

Read Winterburn, Union Pac. Ry. Co., and Carlton Beal, Richfield Oil Corp., presented a review of 249 multi-zone wells originally completed in the Ranger, Upper, and Lower Terminal Zones in the Wilmington Field. This group of wells includes about one-fifth of the present producing wells and about ninety percent of all the original multi-zone completions.

Forty Percent of Wells Repaired

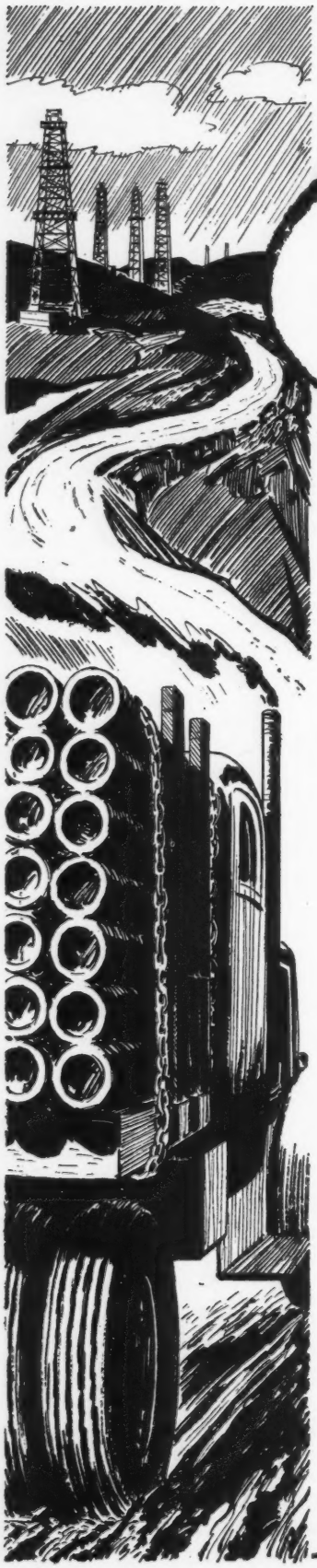
Of these wells, the authors state, forty-seven were equipped to produce separately from three zones, with the balance (202 wells) equipped to produce from two zones. Although the field has been producing for about seven years, almost forty percent of the wells have had to be repaired, after producing only 3.2 years, principally because of bad casing and tubing, water encroachment, and cessation of natural flow.

Many Wells Now Pumping

All of the original multi-zone wells were completed flowing; of these, forty-two percent are now pumping, it was explained. Not one of the multi-zone pumping wells is equipped for simultaneous production of two or more zones separately by artificial lift because of mechanical difficulties such as sand production, corrosion of flow strings and packers, and larger volume water production.

Multi-zone Program Partly Justified

In effect, the authors concluded, over forty-five percent of the original multi-zone wells in the field are operated at the present time so that they are single or combination zone wells. Conclusions are that multi-zone development at Wilmington has not been justified except where surface locations are limited and in those cases where an advantage will be gained in a competitive area.



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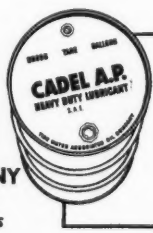
*From a letter of W. O. Crow, of the Crow Transportation Co., Los Angeles, Calif., operating 21 trucks, including six 20-ton Autocar Diesels. Copies of Mr. Crow's letter—and others—are available on request.

CADEL A. P.



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REMEMBER—VICTORY STILL DEPENDS ON YOU

Increasing Propane Recovery in Existing Natural Gasoline Absorption Plants

By F. W. BELL
The Fluor Corp., Ltd.

APRIL MEETING

Because of the continued interest in propane as a substitute for butane in liquefied petroleum gas, and as an intermediate in chemical conversion processes, it is appropriate to consider methods by which its recovery can be increased in existing gasoline absorption plants. In a previous paper presented before the California Natural Gasoline Association, Henry Wade[1] presented an excellent discussion of the principles involved in the design of new plants for high propane recovery. These same principles apply to obtaining an increase in propane extraction in existing gasoline plants.

The problem may be considered in two phases, one, increasing the extraction of propane in the absorber rich oil, the other, retaining the propane thus recovered in the distillation and fractionation sections of the plant.

When considering means available for increasing propane extraction in the absorber, it is convenient to use the absorption factor as a basis. This may be defined as follows:

$$A = \frac{L}{KV}$$

where A = absorption factor
L = rich oil from absorber in mols per unit time
V = rich gas to absorber in mols per unit time
K = equilibrium constant for component under consideration, in this case propane, at absorber pressure and temperature.

Inspection of the absorption factor equation makes it obvious that an increase in the mols of rich oil, usually obtained by increasing the lean oil rate, or a decrease in the equilibrium constant, will result in an increase in the absorption factor, assuming the vapor rate is to be held constant. More simply, this means that an increase in the extraction of propane can be obtained by increasing the molal oil/gas ratio or decreasing the equilibrium constant.

An increase in the molal oil/gas ratio may be obtained in two ways, one by using a lighter oil giving more mols per gallon of oil circulated, the other by increasing the actual volumetric circulation rate. In an existing plant it may be quite expensive to increase the actual volumetric flow rate, since it would probably require new lean oil pumps, additional exchanger surface, and possibly revamping of the absorption and stripping columns. On the other hand, it may well be possible that a lighter absorption oil could be used in the existing equipment without increasing the vapor pressure of the lean oil to the point where lean oil loss becomes excessive. A summary of calculations made to illustrate the effect on propane extraction of increasing molal lean oil flow with fixed gas rate by the two methods mentioned is presented in Table I.

These calculations were made for an existing plant in which the butane extraction is fairly low, only about 78% in the absorber. By inspection of the Table it will be seen that a reduction of the lean oil mol weight from 170 as used in the plant at present, shown in Case I, to 150, as shown in Case II, will result in an increased propane extraction of 666 gallons per day, or 8.6%. The calculations summarized in Case III were made to demonstrate the effect of an increase in volumetric lean oil rate for the original lean oil that would be required to obtain the same molal oil rate as in Case II. For a 10% volumetric increase in the original lean oil, the same molal oil rate will be obtained as with the lighter oil, but the pounds of oil circulated will be materially increased, thus resulting in a somewhat lower absorption temperature due to the greater heat capacity of the lean oil. The 10%

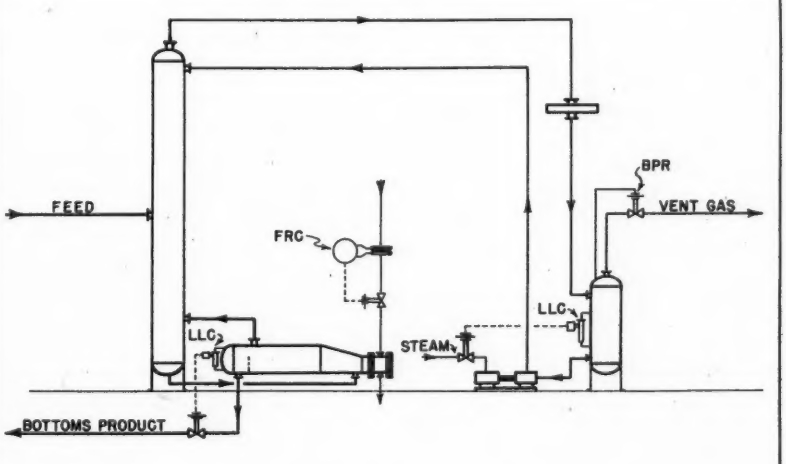


Fig. I
DEETHANIZER CONTROL INSTRUMENTATION
FOR MAXIMUM PROPANE RETENTION

increase in volumetric lean oil rate gave an increase in propane extraction of 874 gallons per day, or 11.3%. Since we are interested, in this paper, only in methods for obtaining an increase in propane recovery, we will not discuss in detail the effect of these changes on butane recovery, but should call to your attention the fact that an increase in butane extraction also resulted. In plants that are already obtaining high butane recovery there would be no material change in the butane extraction by these small changes in lean oil rate.

No attempt has been made to evaluate the increase in absorption oil loss when using the lighter lean oil, since it is quite possible to use a narrower boiling range oil with a lower endpoint without materially increasing the vapor pressure of oil from the still. In actual fact, it is likely that the use of a lighter oil may make it possible to obtain a greater volumetric circulation with the existing equipment, as the oil will have a lower viscosity, thus resulting in less pressure drop through the exchanger and lines. It should also be pointed out that the use of a lighter oil would result in fewer pounds being circulated per unit volume so that the exchange equipment could easily handle the increase in volumetric oil rate up to the point where the weight of oil circulated equaled the original weight of oil. The problem of selection of absorption oil should always be given very careful consideration, both in existing plants and in the design of new plants.

The equilibrium constant may be decreased either by increasing pressure or decreasing temperature. In existing plants it is not ordinarily practical to increase the absorption pressure, so that we will consider only means for reducing the absorption temperature. This may be done by refrigeration applied to the lean oil, rich gas, or both. The distribution of cooling between the oil and gas should be carefully studied since it is possible to cool the oil too much without also cooling the gas. Consideration must be given to the heat of absorption, heat capacity of the oil and heat capacity of the gas to determine the proper distribution of cooling between oil and gas. Each case must be considered individually. A summary of calculations made to illustrate the effect of refrigeration on propane extraction is presented in Table II.

The same absorption case was used in preparation of Table II as in Table I. It was assumed that the oil or gas could be cooled to 60°F from an original temperature obtained with water of 80°F. In all cases it was assumed that the volumetric lean oil rate would be held constant at 205 GPM with a rich gas rate of 41,650 mols per day. Case I illustrates the absorption obtained with water cooling only. Case II illustrates the effect of cooling the oil only. The propane extraction increased 880 gallons per day, or 13.8%. Case III illustrates the effect of refrigeration of the gas only to 60°F, resulting in an increase in propane extraction of 541 gallons per day, or 7%. Case IV illustrates the effect of refrigerating both the oil and gas to 60°F, resulting in an increase in propane extraction of 1,653 gallons per day, or 21.4%. Since it is possible to use a lighter lean oil because of the lower temperature at the top of the absorber resulting in a lower partial vapor pressure of the oil at this point, it is desirable to include calculations showing the effect of combining a lighter lean oil with refrigeration. Case V illustrates the use of 150 mol weight oil in place of 170 mol weight with the lean oil only refrigerated to 60°F, giving an increase in propane extraction of 1,748 gallons per day, or 22.6%. Case VI illustrates the use of the lighter lean oil with refrigeration of both gas and oil to 60°F, resulting in an increase in propane extraction of 2,579 gallons per day, or 33.3%.

It should be pointed out that the temperature to which the streams can be refrigerated is limited by the point of hydrate formation. There are several references giving data on hydrate formation conditions, among which are Katz[2] and Bechtold[3]. Bibliographies included with these papers give practically complete coverage of the literature on hydrocarbon hydrates.

The equilibrium constant can also be reduced by using intercooling to obtain a reduction in the absorption temperature where the temperature rise without intercooling exceeds 15 to 20 Fahrenheit degrees. No calculations are presented covering the use of intercoolers, but it should be pointed out that where intercoolers are used it is important that they be

TABLE I

EFFECT OF INCREASED MOLAL OIL RATE ON PROPANE EXTRACTION

Absorber Pressure — 135 psig
No. of Theoretical Trays — 12
Temperature of Lean Oil — 80°F
Temperature of Wet Gas — 80°F

	RICH GAS		RICH OIL COMPOSITIONS					
			Case I		Case II		Case III	
	Mols/ Day	Mol%	Mols/ Day	Mol%	Mols/ Day	Mol%	Mols/ Day	Mol%
CO_2	2,378	5.71	77	.50	85	.50	85	.50
C_1	31,933	76.67	617	3.99	675	3.97	690	4.04
C_2	2,772	6.66	281	1.82	306	1.80	314	1.84
C_3	2,504	6.01	744	4.81	808	4.75	828	4.85
C_{4i}	351	.84	222	1.44	240	1.41	246	1.44
C_4	920	2.21	773	5.00	814	4.79	834	4.88
C_{5i+}	792	1.90	792	5.12	792	4.66	792	4.64
Lean Oil	.....	.....	11,954	77.32	13,290	78.12	13,291	77.81
Total	41,650	100.00	15,460	100.00	17,010	100.00	17,080	100.00
Lean Oil Rate, g.p.m.			205		205		228	
Lean Oil Gravity, °API			40		43.3		40	
Lean Oil Molecular Weight			170		150		170	
Absorption Temperature, °F			102		103		101	
Dry Gas Outlet Temperature, °F.			84.6		84.9		85.1	
Propane Increase, %			0		8.6		11.3	
Propane Increase, Gals/D					666		874	

Note: Case I is the original design basis.
Case II illustrates the use of a lighter lean oil.
Case III illustrates the increase in volume rate of original lean oil required to obtain same molal oil rate as in Case II.

TABLE II
EFFECT OF REFRIGERATION OF OIL AND GAS TO ABSORBER ON PROPANE EXTRACTION

Absorber Pressure — 135 psig
No. of Theoretical Trays — 12

	RICH GAS		RICH OIL COMPOSITIONS											
			Case I		Case II		Case III		Case IV		Case V		Case VI	
	Mols/ Day	Mol%	Mols/ Day	Mol%	Mols/ Day	Mol%	Mols/ Day	Mol%	Mols/ Day	Mol%	Mols/ Day	Mol%	Mols/ Day	Mol%
CO_2	2,378	5.71	77	.50	84	.53	81	.52	88	.55	90	.52	96	.55
C_1	31,933	76.67	617	3.99	669	4.24	652	4.17	698	4.38	725	4.19	767	4.38
C_2	2,772	6.66	281	1.82	316	2.00	299	1.91	333	2.09	339	1.96	366	2.09
C_3	2,504	6.01	744	4.81	847	5.37	796	5.09	903	5.67	912	5.27	992	5.67
C_4	351	.84	222	1.44	256	1.62	241	1.54	279	1.75	274	1.58	302	1.73
C_5	920	2.21	773	5.00	855	5.42	821	5.25	884	5.55	878	5.07	903	5.16
C_6+	792	1.90	792	5.12	792	5.02	792	5.06	792	4.97	792	4.58	792	4.53
Lean Oil	.....	.....	11,954	77.32	11,956	75.80	11,956	76.46	11,953	75.04	13,290	76.83	13,282	75.89
Total	41,650	100.00	15,460	100.00	15,775	100.00	15,638	100.00	15,930	100.00	17,300	100.00	17,500	100.00
Temp. Gas in, °F			80		80		60		60		80		60	
Temp. Gas out, °F			84.6		68.3		78.5		64		65.9		62.5	
Temp. Oil in, °F			80		60		80		60		60		60	
Temp. Oil out, °F			102		92		97		86		94		86	
Absorption Temp., °F			102		92		97		86		94		86	
Lean Oil Rate, g.p.m.			205		205		205		205		205		205	
Lean Oil Gravity, °API			40		40		40		40		43.3		43.3	
Lean Oil Mol Weight			170		170		170		170		150		150	
Propane Increase, %			.....		13.8		7.0		21.4		22.6		33.3	
Propane Increase, Gals/D			.....		880		541		1653		1748		2579	

Notes: Case I —The original design basis. Oil and gas in at 80°F.
Case II —Lean oil only refrigerated to 60°F.
Case III —Rich gas only refrigerated to 60°F.
Case IV —Lean oil and rich gas both refrigerated to 60°F.
Case V —Lighter oil used with same volume rate as before. Lean oil only refrigerated to 60°F.
Case VI —Same as Case V, with rich gas and lean oil both refrigerated to 60°F.

properly located in the absorber and that the oil circulation be maintained in order to increase the extraction of propane. The location of the intercoolers is a function of the gas-oil ratio which affects the temperature gradient in the absorber. In general it is difficult, from a mechanical standpoint, to add intercooling to existing equipment.

Another way in which the propane extraction may be increased is by the addition of trays in the absorber or by improving the tray efficiency of existing absorbers. Increasing the number of absorption trays is effective on propane extraction only where the absorption factor is between approximately 0.6 to 2.0, depending on the number of theoretical trays in the existing absorber. This may readily be understood by reference to the Brown[4] absorption factor diagram. Revamping or addition of absorber trays is a somewhat expensive and mechanically difficult task in an existing plant.

The next phase to be considered in the problem of increasing propane recovery in existing absorption plants is the retention of the propane in the distillation and fractionation steps. Since every plant will differ in the matter of venting and stripping of the rich oil, these problems must be considered for each individual plant by someone competent to make the necessary process study. The main problem is to determine how best to dispose of the increased pickup of methane and ethane in the rich oil necessarily resulting with the increased propane extraction. The still vapor may be recycled to the main absorber or reabsorber, compressed and condensed, or compressed direct to the stabilizers. The amount of the still vapors may be materially reduced, or even entirely eliminated, by the use of stabilizer bottoms recycle[5] to the still final condenser. It should be noted, however, that stabilizer bottoms recycle is effective only where the vapor pressure of the stabilizer bottoms product is considerably less than the vapor pressure of the still overhead product. This means that in general the still accumulator pressure must exceed 50 psig for effective use of stabilizer bottoms recycle. One point which might be overlooked when attempting to use stabilizer bottoms recycle is that it is necessary to obtain thorough mixing of the recycle liquid with the still product vapor in the condenser, which requires that the condensers, where atmospheric, be of the upflow type, or where shell and tube to give the necessary mixing by effective baffling.

It is often desirable to recycle only a sufficient amount of the stabilizer bottoms to prevent the still overhead vapor from building up a high internal cycle through the absorption step. Where stabilizer bottoms recycle is used to reduce or eliminate recycle vapors to the absorbers the advantage is two-fold since it reduces or eliminates recompressor horsepower and makes the lean oil available for primary absorption of the plant inlet streams rather than secondary absorption of recycle gas .

The final point to be considered is retention of the propane in a deethanizer column. This is another place where refrigeration should be considered because it is possible to reduce the amount of propane loss required for the production of reflux for this column by reducing the condensing temperature. The temperature to which the deethanizer overhead vapor may be refrigerated is again limited by the hydrate formation temperature. The use of refrigeration at this point should be studied from a profitability standpoint.

One more thing that should be considered in connection with the deethanizer is the method of control to be used for maximum retention of propane. This is illustrated in Figure 1 in which is shown a flow rate controller on the steam to the reboiler to obtain constant heat input with a liquid level con-

troller on the reflux accumulator controlling the reflux returned to the column so that all liquid condensed in the overhead condenser will be returned as liquid to the column. By the use of constant heat input to the column to obtain the desired stripping of ethane from the bottoms with a return of all liquid formed in the overhead condenser maximum retention of propane is obtained regardless of cooling water temperatures.

To summarize the problem of increasing propane recovery in existing gasoline absorption plants, there are four things that can be done without making expensive or radical changes and with a minimum of shutdown time. These are:

a) The use of a lighter absorption oil.

b) The use of refrigeration on the lean oil and rich gas and deethanizer overhead.

c) The use of stabilizer bottoms recycle to the still final condenser.

d) The use of the deethanizer control method as described.

All of the methods should be given careful study to determine their economic feasibility before making any changes in a plant.

References:

(1) Wade, H. W., DESIGN OF GASOLINE PLANTS FOR HIGH PROPANE RECOVERY, Proceedings CNGA, Vol. XVII, No. 9, Sept., 1942.

(2) Katz, D. L., PREDICTION OF CONDITIONS FOR HYDRATE FORMATION IN NATURAL GASES, Petroleum Technology, July, 1944.

(3) Bechtold, I. C., FORMATION OF HYDROCARBON HYDRATES, California Oil World, March 2, 1942, April 1, 1942.

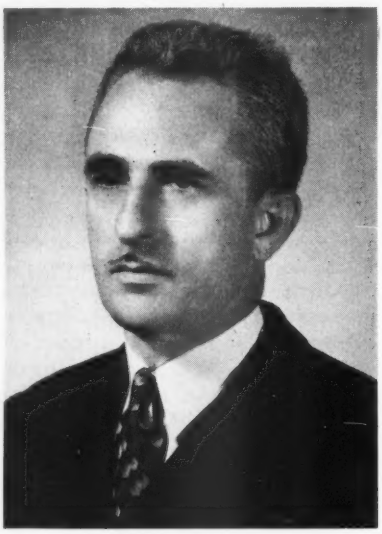
(4) Brown, G. G., and Souders, Jr., Mott. FUNDAMENTAL DESIGN OF ABSORBING AND STRIPPING COLUMNS FOR COMPLEX VAPORS, Ind. Eng. Chem., p. 519, May, 1932.

(5) U. S. Patent No. 2,184,596.

BUY WAR BONDS

Dave Smith Joins Western Gear Engineering Staff

Dave Smith, who has served in an engineering capacity at the Los Angeles plant of one of the country's largest manufacturers of oil well drilling machinery and as chief engineer of their plant in Houston, Texas, has accepted a position with Western Gear Works. His engineering developments have resulted in several patents on oil well drilling machinery.



Dave Smith

His activities at Western Gear will be concerned with engineering of their oil field products which include Pacific-Western pumping units, speed reducers and increasers and band wheel drives. The oil field division is headquartered at the Lynwood plant. Other Western Gear plants are at Seattle and San Francisco.

California Oil Industry Carries Heavy Tax Burden

The Western Oil & Gas Association (formerly Calif. Oil & Gas Assn.) has released the first of a series of leaflets designed to acquaint the public with facts about the western oil industry. Figures cited to show what California contributes to the nation's business are eye-openers to oil men themselves.

One thousand and thirty oil companies in California have a combined yearly payroll of $186,000,000, which affects more than 70,000 employees; and spend $60,000,000 annually for supplies and materials.

Last year 21,200 California oil wells produced 311,646,000 barrels of oil valued at about $1 a barrel. In 1944 the manufacture of 100 octane gasoline had increased 444 per cent since January, 1942.

Last year 575 million cubic feet of natural gas were produced. This is more than the combined consumption of natural gas in New York, Pennsylvania, Ohio and Illinois.

In 1944 the California oil industry paid and collected $172,000,000 in taxes. Of taxes paid, $30,000,000 went to cities, counties and the State. The Federal Government was paid $65,000,000 in income and profit taxes.

Taxes collected from motorists consisted of $50,000,000 for the State of California, and $27,000,000 for the Federal Government.

Lieutenant (j.g.) Ted L. Bear of the U. S. Navy, Elk Hills, presented aerial photographs and maps to members of the San Joaquin Geological Society who met in Bakersfield at their March meeting. The exhibits were taken by the navy on the eve of the evasion of France, at which time Lt. Bear was connected with the Air Photo Interpretation Division of the Navy. Left to right: Colonel Frank Hornkohl, Robert L. Rist, Lt. Bear, H. W. Weddle, Secretary of the society and John Stewart Loofbourow, all of Kern County.

A. H. DeFriest

C. S. Beesemyer

John C. Sample

General Petroleum and Gilmore Oil Announce Executive Changes

Two outstanding oil companies of the Pacific Coast are now one.

Looking to the need for better facilities, wider distribution and improved service in a post war period, the Gilmore Oil Company and General Petroleum Corporation have consolidated into one organization, continuing under the name and management of General Petroleum Corporation.

Announced by A. H. DeFriest, Vice President and Director of Marketing of General Petroleum, who has headed the committee working out the many details of the actual consolidation, are many appointments including the personnel of both companies.

Clarence S. Beesemyer, who worked with Earl Gilmore in the development of Gilmore Oil Company practically from its inception, and who has been president of that company since retirement of Mr. Gilmore in 1944, has been elected to the Directorate of General Petroleum Corporation; and John C. Sample, for a long time the general sales manager of General Petroleum, has likewise been elected a Director.

Naming of General's C. H. Wartman and Gilmore's H. Alber as assistant general sales managers, and W. J. (Jerry) Hawkins, of Gilmore, as assistant to the general sales manager, are among important appointments first announced.

Succeeding C. H. Wartman as resident manager of the Southern California-Arizona area is Mark Butterworth, who for many years has played a conspicuous part in the advancement of Gilmore. J. B. Erickson, who has served General Petroleum as a district manager and more recently as division commercial sales manager, has become assistant resident manager, serving with Mr. Butterworth. These are but a few of the many appointments to be announced within the organization, which includes the states of California, Oregon, Washington, Nevada, Arizona and parts of Utah and Idaho within its marketing area.

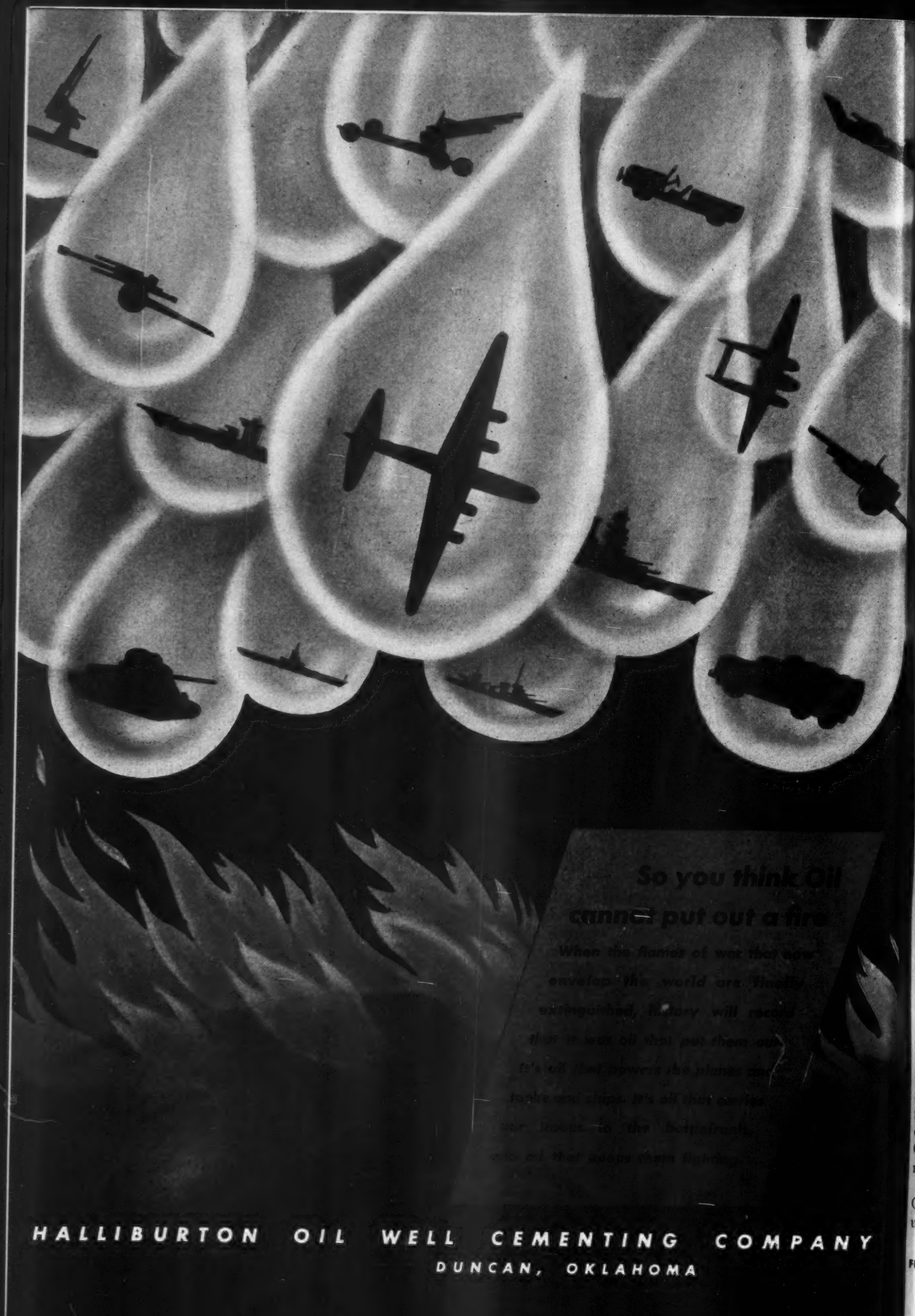
In Washington, Albert E. Horn, Jr., is resident manager, and R. F. Johnson assistant resident manager. In Oregon, Baxter F. Ball is resident manager, and E. W. Ellis the assistant. In Northern California, Vern A. Bellman serves as resident manager, with Gilmore's Earl L. Koster as assistant resident manager. Other appointments are to be announced.

Stressed in the announcement made by Vice President DeFriest is the statement that the consolidation of General Petroleum and Gilmore Oil Company has culminated several years of close and pleasant business relationships between the two companies, and is in the interests of greater efficiency and opportunity for all. General Petroleum, marketer of Mobilgas and Mobiloil, has for many years been the West Coast affiliate of Socony-Vacuum Oil Company. It is also a well established but perhaps not widely known fact that for a considerable period a substantial interest in Gilmore has been vested in Socony-Vacuum, and that recently this parent company acquired all the Gilmore properties.

Henceforth, with one exception, all west coast marketing will be under the direction of General Petroleum. The exception is a newly formed subsidiary, The Gilmore Asphalt and Road Oil Company, of which W. G. Julier is Vice President and Sales Manager. The independent service station dealers of both companies, of which there are many thousands, will be served by General Petroleum with Mobilgas, Mobiloil and Mobilubricants.

Colorful in the extreme are the histories of General Petroleum and Gilmore. Impressive also are the respective parts played by the personnel of both companies in the development of the west and one of its most important basic industries.

Both companies were founded by picturesque characters. A. F. Gilmore, founder of Gilmore Oil Company, was a rancher. He arrived in Southern California in 1880, selected 256 acres of land near what is now the intersection of Third & Fairfax Street, Los Angeles, and



HALLIBURTON OIL WELL CEMENTING COMPANY

DUNCAN, OKLAHOMA

began the business of conducting a successful dairy ranch. His interest in oil developed from a visit to the celebrated La Brea Pits, where black gold then bubbled and still bubbles from the earth. He started drilling for oil, striking it on the third attempt, and bringing in a field of 24 producers. First marketing kerosene and burner oil, he turned to selling gasoline when motoring became popular. It was then that his son, Earl Gilmore, and Clarence S. Beesemyer, joined the organization, learned the business step by step, finally creating one of the most popular oil companies on the Pacific Coast, with thousands of alert dealers handling their products.

Also colorful, but operating originally in a different field of endeavor, was Captain John Barneson, a veteran of the sea lanes and originator of oil burning in steamships. He was the founder of the Esperanza Oil Company in 1910, which was changed to General Petroleum Company in 1912, and thereafter developed in spectacular growth to its present status as General Petroleum Corporation.

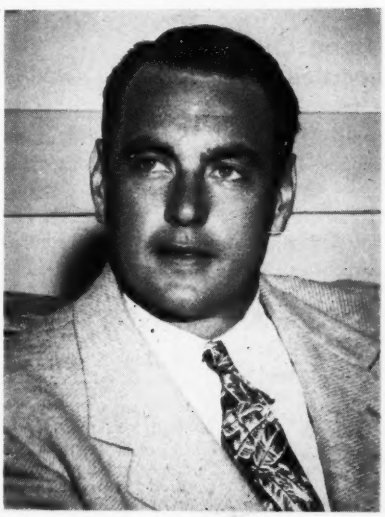
Captain Barneson held the distinction of having built the first pipeline over the Tehachapi Mountains, thus bringing oil from its San Joaquin Valley sources through Los Angeles to the Torrance and San Pedro areas. A new 10-inch pipeline was put over the mountains from Lebec to Torrance in 1935, to meet expanding needs of General refineries.

During 1944 General Petroleum properties in California and Wyoming produced a total of 19,000,000 barrels of crude oil, while its refineries were heavily expanded. Several years ago a new refinery site of over 300 acres was acquired at Torrance, and here has been erected a multi-million dollar refinery. It is one of the largest in the industry, and is turning out huge quantities of super 100-octane gasoline for the armed services, using T. C. C. and magic bead process originated and developed by the Socony-Vacuum Oil Company and now licensed to many other leading oil companies.

Combined assets of the Gilmore Oil Company and General Petroleum, now operated by the latter corporation, are placed at approximately $105,000,000.

Simpson Bros. of Los Angeles Win Maritime "M" Award

For a score of years before the war, the Davenport Manufacturing Company of Los Angeles, California, was content to coast along at its job of producing heavy-duty farm and road equipment. Came the war and it bestirred itself enough to embark on a limited war-conversion program. But that conversion wasn't fast enough to suit the taste of Robert N. Simpson, who acquired a 50 per cent interest in the company in June, 1942. Nor was it fast enough for his brother, A. F. Simpson, Jr., who purchased the balance of the corporation's stock four months later.



Robert N. Simpson

When the Davenport Manufacturing Company became the Simpson Steel Company the result was a shakeup as resounding as if a ten-ton I-beam had been dropped in a china shop.

The production of farm and road machinery went from $176,000 in 1942 to around $225,000 in 1944. Up went the production of war materiels from a mere $210,000 in 1942 to around $4,500,000 in 1944. The achievements of The Simpson Brothers still has west coast businessmen blinking with admiration.

They began by acquiring properties of the Commercial Piping and Engineering Company of Vernon, California. Next they built up their working equipment with purchases of new cranes, trucks, plate rolls, shears, punching equipment, saws, grinders, A.C. and D.C. welding equipment. They mapped out subcontractor agreements with such concerns as Consolidated Steel Corporation, Los Angeles Shipbuilding and Drydock Corporation, Douglas Aircraft,—to name only a few. From their production line rolled war goods for the U. S. Maritime Commission, Army, Navy, Army Air Corps, Defense Plant Corporation, Ordnance Department, and other agencies.

No less imposing was the variety of their output: Ship masts, operating gears, king posts, ladders, grating, stanchions and hand rails, gun platforms, hose racks, depth charge racks, as well as such high-precision items as B-17 fuselage bulkheads, hydraulic jacks, and Grouser shoes for tanks.

The result of all these aggressive tactics was two-fold:

1) The Simpson Brothers upped employment from 33 in 1941 to 650 workers at present, and increased the monthly output to $450,000.

2) In recognition of outstanding achievement, and for constantly meeting accelerated production requests, they were recently awarded the Maritime "M" Pennant, Victory Fleet Flag, and special merit badges for every one of their employees.

Lunkenheimer Elects

At the annual meeting of The Lunkenheimer Company, Cincinnati, held March 13, the following officers and directors were elected: Frank P. Rhame, President and General Manager; Homer E. Lunken, First Vice-President and Assistant General Manager; Harry A. Burdorf, Vice-President, Sales; Charles W. Burrage, Secretary; Chester C. Isekeit, Treasurer and Controller. Directors are Harry A. Burdorf, Henry G. Frost, Chester C. Isekeit, Carl M. Jacobs, Edmund P. Lunken, Homer E. Lunken, Frank P. Rhame.

Field Development

PREPARED BY CALIFORNIA OIL WORLD NEWS SERVICE

Los Angeles Basin

Two Start at East Coyote

Severns Drilling Co. (Clayton Severns and Ashley DeWitt) is building rig for No. C-7 at a point 1840 ft. N. and 1710 ft. W. of the southeast corner of sec. 13-3s-10w.

Hathaway Co. is building rig for No. 16 to be drilled north of well No. 12. The company's Anaheim Union No. 15 bottomed at 3285 ft. and is testing water shutoff on a 7-in. combination string cp'd. at 807 and 3110 ft.

Dominguez Try Getting Deep

Shell Oil Co. Inc., Reyes No. 135, deep test to basement, in the Dominguez field, last was reported prospecting steadily ahead below 12,500 feet.

In the no-dope category, development information as the well progressed is a company secret. Unofficial sources, however, credit the project with uncovering something of interest since passing the 12,000-ft. mark.

Leffingwell Test Drilling On Down

Midway between the East Coyote and Santa Fe Springs field, Standard Oil Co. is drilling Lewis No. 1 wildcat on sec. 11-3s-11w in the Leffingwell area at a depth slightly below 2550 feet in sand and shale.

Exploration will be carried to approximately 10,000 ft., more or less.

Wilmington Well Finishes Flowing

Flowing initially 716 barrels of 28.8 gravity crude oil in a 19-hour gauge through a 1-in. bean, Richfield Oil Corp. completed Pacific Dock No. 54 in the Wilmington field at a redrilled depth of 5825 ft.

Union Oil Co. Locates New Tries

Union Oil Co. has foundation in for its Sansinena No. 15 wildcat on sec. 30-2s-10w in the La Habra area, Los Angeles County.

In the Las Llajas area, the "76" banner flies over site selected for Corehole No. 1 on sec. 22-3n-17w. This will be a geological informant, on which future operations will be largely based.

Athens Venture Redrills at 6900 ft.

In an effort to jump a fault, General Exploration Co. Ltd., is directionally drilling Johnson No. 1 test on wildcat ground in the Athens area at 6900 ft. Located on sec. 11-3s-14w, the well went to original depth of 8944 ft., before backing up.

Newhall-Potrero Find Confirmed

Confirming and even surpassing earlier expectations, Barnsdall Oil Co.'s R. S. F. No. 44 deep test on the east flank of the Newhall-Potrero field was completed flowing from a

LOS ANGELES BASIN WILDCATS

Area	Well	No.	Section	Depth	Status
Athens	Gen. Expl. Co. of Calif., Johnson	1	11, 3-14	8944	Redrilling
Aliso Canyon	Standard Oil Co., Ward	3-1	27, 3-16	9363	Drilling
	Standard Oil Co., Wigdal	1	19, 3-16		Location
Chatsworth	Shell Oil Co., Davey Corehole	1	25, 2-17		Rigging up
Del Valle	The Texas Co., Kern	1	18, 4-17	2908	Drilling
Gardena	Ohio Oil Co., Gardena Comm.	1	25, 3-14		Rigging up
Hawthorne	Hellman, Loren H., Hawthorne	1	17, 3-14		Location
La Habra	Union Oil Co., Sansinena	15	30, 2-10		Foundation
Las Llajas	Standard Oil Co., Brady Est.	2-1A		2800	Drilling
Lincoln Park	Union Oil Co., Las Llajas Corehole	1	22, 3-17		Location
	Dumm Bros. Pet. Corp., Olympic	15	24, 1-13		Rig
Newhall	Anderson, J. I., Tomato Can	1	11, 3-16	4726	Idle
	British-Am. & The Texas Co., NLF	2	21, 4-17	180	Drilling
	C.C.M.O. Co., Sanborn	1	6, 3-16	7327	Cleaning out
Oak Canyon	Western Gulf Oil Co., Stevens	B-1	5, 4-17	2609	Drilling
Pico Canyon	Standard Oil Co., Pico C. O.	42	1, 3-17	7848	Drilling
Pomona	Jones, Everett, Well	1	17, 2-9	826	Drilling
San Jose Hills	Continental Oil Co., Bayley	1	29, 1-9	3576	Drilling
	Ohio Oil Co., Legrand	1	30, 1-9	5624	Drilling
Turnbull Canyon	Capital Co., Capital	1-3	11, 2-11		Rigging up
W. Coyote	Pike Drlg. Co., Bolsa-Stern	1	14, 3-11	3210	Drilling
	Standard Oil Co., Lewis	1	11, 3-11	651	Drilling
	Imperial County				
Brawley	Amerada Pet. Corp., Veysey	1	9, 13-13	5629	Drilling
Holtville	The Texas Co., Grupe-Engebretsen	1	8, 16-16	9014	Redrilling
	Orange County				
Buena Park	Gen. Pet. Corp., Librown	1	21, 3-11	1013	Drilling
Costa Mesa	Barnhart-Morrow Deeble	1	18, 6-10		Rig
	Darling, O. F., Darling	1	23, 6-10	1904	Prep. to deep.
	Delaney & McLeod	1	17, 6-10		Rig
	Macoil Co., Townsend	3	21, 6-10	6134	Redrilling
	Menvig, Emil L., Well	1	21, 6-10		Rigging up
Huntington Bch	Atha Expl. Co., Newland	12-3	12, 6-11	4250	Drilling
Kraemer	Mid. Cal. Pet. Co., Mid. Pet.	K-1	24, 3-9	2512	Fishing d.p.
Yorba Linda	Skylark Mfg. Co., Howe	1	22, 3-9	1830	Drilling
	San Bernardino County				
Chino Hills	Chino Hills Oil Co., Kraemer	2	33, 3-28	1366	Bailing

new producing zone, designated as the 6th zone, 534 barrels of 38 gravity clean oil a day through a 12/64-in. bean. Gas output was rated at 590 mcf.

When the flow bean was open to approximately one-half inch, production increased to 750 barrels daily rate.

Production is coming from 9668-9802 ft., perforated at intervals.

The drilling of this well added six zones below the three upper producing horizons previously established and the source currently of 46 producing wells on Barnsdall's holdings, which practically blanket the entire field.

The fourth zone at this location gives definite signs of being wet, and as for the 5th, 7th, 8th and 9th zones, they showed up on the electric log, but with their productive capacity yet to be determined, probably by the drilling of additional wells.

Rosecrans Try Suspends Work

Atlantic Oil Co. has suspended work on Wilcox No. 1 well. This decision resulted from unsuccessful gun-perforating tests in the company's Marland-Miley No. 1 across the highway on the westerly side of Avalon Blvd.

Huntington Beach Pump Completion

Extending the proved area of state land at Huntington Beach, Signal Oil & Gas Co. finished State No. 163-1 well pumping 213 barrels of 22 gravity oil daily, cutting 2 per cent. Original depth is 4936 with plug at 4870 feet, and casing set on plug.

Thorley Well Recompleted

Thorley Oil Corp., Athens No. 12-2 at Athens-Rosecrans, ran 2½-in. tubing to 8100 ft., with packer at 7760 ft., and recompleted flowing an estimated 120 barrels a day, cutting 0.1 per cent through a 16/64-inch bean under 180 pounds flow pressure. Late production is 88 barrels daily under 160 pounds pressure.

Capital Co. at Costa Mesa

Capital Co., a Bank of America affiliate, is preparing to drill a test well on the vast Irvine Ranch in the Costa Mesa area, north of the Coast Highway and near the Newport Beach estuary.

Delaney Petroleum Corp. located water entry at 1850 ft. in Karles No. 1 and recompleted the well flowing clean oil at a daily rate of 95 barrels.

Newhall Wildcat Cleaning Out

C. C. M. O. has started cleaning out operations in the old Aztec Oil Co.'s Sanborn No. 1 wildcat on sec. 6-3n-16w in the Newhall area, preparatory to running an orientation survey.

Present depth of the well is 7327 feet. It is not known how far deeper the well will prospect when once the drill resumes. It may go, however, to beyond the 12,000-ft. mark.

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Coastal and Northern District

Continental Starts Red Mountain Test

Continental Oil Co. has graded derrick site for Casitas No. 2 wildcat, to be drilled on sec. 7-3n-23w on Red Mountain, north of Ventura. The first well was drilled nearby several years ago to a depth of 8000 ft. and abandoned, after logging nothing but hard sand.

Five years ago Shell Oil Co. drilled Wood No. 1 in the same sector to 5755 ft., without success.

Huasna Test Oil Failure

After exploring to a bottom at 5440 ft. in hard shale, Amerada Petroleum Corp. decided to call it quits at that depth in Tar Springs Ranch No. 1 on sec. 25-32s-14e in the Huasna area of San Luis Obispo County, and the well was abandoned.

Ojai Well Boasts Shows

Volunteer Petroleum Corp., Hilltop No. 2 in the Ojai area on sec. 7-4n-21w reported fractured siltstone with oil showing in drilling around 2350 ft. The No. 1 on the same section is idle in surface formations.

Prepare Test on Snowball Anticline

Grubb & Hawkins are preparing to go back into an old well, Snowball No. 1, on sec. 19-4-24 on Snowball anticline, five miles east of Carpinteria in Ventura County, to carry the hole on down.

The project was first drilled by Associated Oil Co. to 2083 ft., during 1929. It was suspended, however, due to a combination of circumstances, despite the prospective appeal of the area.

Seepages of Eocene origin abound on the property.

Los Olivos Test Standing Idle

Hub Oil Co., La Laguna No. 1 wildcat on sec. 7-7n-30w in the Los Olivos area, Santa Barbara County, is standing idle at 5075 ft. The 7-in. casing was set at 4622 ft.

Los Alamos Try Making Hole

Bel-Air Oil Co., Price No. 1 on sec. 21-8n-32w is drilling in hard shale at 4715 feet. The top of Foxen was placed at 750 and the Sisquoc at 1180 ft.

Superior Rigging Northern Gas Try

Superior Oil is rigging to drill a wildcat well in search of gas in Yolo County, not far from Davis. The project will be known as Corcoran No. 1 on sec. 5-8n-1e, near the center of the section.

Santa Maria Well Flows

By deepening from an original depth of 4671 to 5482 ft. in the Knoxville sandstone, George F. Getty, Inc., Vicente No. 1 in the Santa Maria west side field became an excellent producer. On flow tests it reacted at a rate of 250 to 300 barrels a day.

The well was first brought to conclusion September, 1941, pumping 50 barrels of 14 gravity oil from 4671 ft.

The Vicente No. 3 is being prepared for deepening from present bottom at 4380 ft.

Buellton Explorer Digging Hard Shale

On the Skytt Ranch between Buellton and Lompoc Valley, Richfield Oil Corp. is digging hard shale at 3200 ft. in No. 1 on sec. 4-6n-32w, Santa Barbara County.

The project has attracted attention of landowners for miles in every direction from well site.

Cholame Valley Test Going Down

Rankin & Taylor, Oildale operators, have started the drilling of Jack No. 1 on sec. 17-25-16 in the Cholame Valley area of San Luis Obispo County, with the bit last reported in surface formations.

COASTAL COUNTIES WILDCATS

Area	Well	No.	Section	Depth	Status
	Santa Barbara County				
Bradley Canyon	Union Oil Co., Fugler	1	3, 9-33	3410	Drilling
Buellton	Richfield Oil Corp., Skytt	1	4, 6-32	2672	Drilling
Cat Canyon	Krieger Oil Co., Los Flores	1	27, 9-33		Material
Gaviota	Standard Oil Co., Hollister	1	35, 5-33		Rig
Los Alamos	Bel-Air Oil Co., Price	1	21, 8-32	4453	Drilling
Los Olivos	Hub Oil Co., La Laguna	1	7, 7-30	5075	Idle
	Ventura County				
Camarillo	Barth, D. A., Well	1	32, 2-20	520	Idle
Fillmore	Standard Oil Co., Elkins	1	6, 3-19	6800	Drilling
Ojai	Delaney Pet. Corp., Victory	1	8, 4-21	2711	Drilling
	Volunteer Pet. Corp., Hilltop	2	7, 4-21	2350	Drilling
	Volunteer Pet. Corp., M & L	1	7, 4-21	245	Idle
Owensmouth	T.W.A.O. Co., Triunfo	1	12, 1-18		Rigging up
Oxnard	Lloyd Corp., Ltd., Todd	A-1	6, 1-22	4211	Idle
Red Mt.	Continental Oil Co., Casitas	2	7, 3-23		Grade
Santa Paula	Standard Oil Co., Santa Paula	1	10, 4-20	1233	Drilling
Snowball Anticline	Grubb & Hawkins Snowball	1	19, 4-24	2802	Foundation
Timber Canyon	Hickey Noble J., Temple	1	22, 4-21	775	Idle
	San Luis Obispo County				
Tar Springs	Amerada Pet. Corp., Tar Springs	1	25, 31-14	5429	Drilling

NORTHERN COUNTIES WILDCATS

County	Well	No.	Section	Depth	Status
Contra Costa	Ardly Pet. Co., Almond	1	3, 2n-2w	100	No report
	Shell Oil Co., East Bay	1	13, 1n-3w	6489	Drilling
Sacramento	The Texas Co., Walnut Grove	1	35, 5n-4e		Prep. to spud
San Benito	Panoche Pet. Co., Panoche	2	24, 16s-10e	160	Repair roads
	San Benito Oil Co., Fries Regan	1	4, 13s-5e	4277	Idle
Solano	Amerada Pet. Corp., Atkinson	1	10, 7n-2e	3031	Fishing
	Amerada Pet. Corp., Comber	1	19, 6n-2e	4143	Drilling
	Shell Oil Co., Lambie	3	25, 4n-1w	2366	Drilling
	Standard Oil Co., Suisun	6	5, 3n-1w	3049	Drilling
	The Texas Co., Winchester	8-1	4, 6n-4e	3774	Drilling
Sonoma	Gregory, Leonard A., Bettinelli	1	29, 5n-6w		Location
Sutter	Buttes Oilfields, Inc., Buttes-Ward	1	2, 15n-1e	6500	Testing
Yolo	Superior Oil Co., Corcoran	1	5, 8n-1e		Rigging up
	The Texas Co., Dunnigan	14-1	12, 10n-1w		Grade
	The Texas Co., Salisbury	1	20, 10n-1e	6856	Drilling

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Shell Gas Test Drills and Cores

In the Lafayette area of Contra Costa County, Shell Oil Co. Inc. is drilling ahead and spot coring in East Bay No. 1 gas test below 6700 ft. The well site falls on sec. 13-1n-3w, and Pike Drilling Co. is the drilling contractor.

Santa Paula Try Making Headway

Standard Oil Co., Santa Paula Unit No. 1, a wildcat, on sec. 10-4-20 in the Santa Paula area, Ventura County, has been carried beyond 1500 ft., with drilling being continued ahead.

The L. B. Ellington project on sec. 8-4n-21w between Santa Paula and Ojai is unofficially credited with showings of interest below 3200 feet.

Standard holds acreage in sec. 3, 4, 9 and 10.

Casing Travelling in South Mountain Job

Having recovered fish, F. E. Fairfield, S. M. No. 3 on sec. 19-30-20 at South Mountain has casing travelling into the hole to set at a point above bottom at 3116 ft.

Union Oil Adds Santa Maria Well

Union Oil Co. completed Silva No. 2 on the Rancho Guadalupe in the Santa Maria field for 183 barrels a day of net 16.2 gravity oil from 5345 ft.

Well Prospects on Cuyama Rancho

On sec. 25-11n-28w on the San Luis Obispo County side of the Cuyama river, Halvern L. Norris is drilling well No. 1 in the Cuyama rancho area around 1000 ft. The well site fronts Cottonwood Canyon.

In past years a number of wells have been put down on both sides of the river in the general area without finding commercial production. All were shallow tests.

Leasing in the area, active for some months, continues at an even pace, with participants including both major and independent organizations.

Del Valle Test Possible Strike

The Texas Co., Kern No. 1 wildcat test on sec. 18-4n-17w, a half mile northwest of the present limits of the Del Valle field, logged oil showings below 2900 feet, indicative of a strike of some degree of importance.

Encounter with oil sand at this level, relatively shallow with producing horizons in the field proper, point to a new discovery, rather than an extension of Del Valle, at this stage of operations.

The Texas Co. holdings total 1200 acres. Bankline Oil Co. has 160 acres, offsetting The Texas Co. ground.

A String is No Better than its Weakest Joint . . . . .

So more and more operators are locating accurately the worn areas in tubing and casing by using

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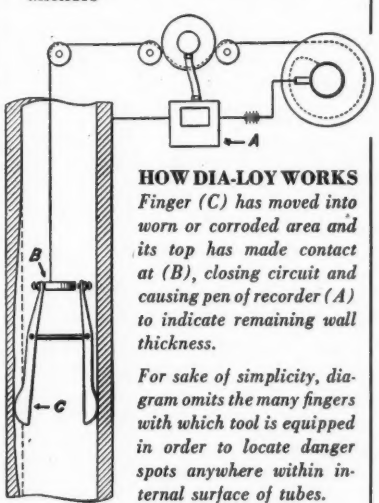
TUBULAR SURVEYS

to reduce future tubing splits . . . classify casing according to condition and value, etc.

DIA-LOY CUTS OPERATING COSTS

- **by tubing surveys, in wells, or on racks**
- **by casing surveys, in wells**
- **of second-hand tubing, by determining conditions and value**
- **of pressure cementing jobs, by eliminating weak tubing**
- **by locating tubing catchers and anchors**



HOW DIA-LOY WORKS

Finger (C) has moved into worn or corroded area and its top has made contact at (B), closing circuit and causing pen of recorder (A) to indicate remaining wall thickness.

For sake of simplicity, diagram omits the many fingers with which tool is equipped in order to locate danger spots anywhere within internal surface of tubes.

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Petroleum Engineer
LONG BEACH 7, CALIFORNIA
Telephone 495-16

San Joaquin Valley

Canal Test Given Up

After conducting a formation test of the interval of 9652-9669 ft. in K.C.L. Pioneer No. 77-32 on sec. 32-29s-25e on wildcat ground near Canal, which failed of its purpose, The Texas Co. decided to call it quits at that location. Prospecting was carried to a total depth of 9766 ft.

Santiago Try Drills in Shale

Western Gulf Oil Co., Woodward U. S. L. No. 1 on sec. 25-11n-23w in the Santiago area is drilling at 1220 ft. in shale. The top of the Brown shale placed at 1124 ft. A formation trial between 539 and 597 ft. recovered 22 ft. of mud.

Producer Promised at Race Track Hill Area

Formation test of Kern Oil Co. Ltd., No. 28-34 in the Race Track Hill area, promised ultimate completion of a producer. Oil sand was logged from 4575 to 4632 ft. Packer was set at 4565 ft. and with tester open 53 minutes, the well flowed 200 barrel per day rate of clean 40 gravity oil and an estimated 3,000 mcf. of gas.

The well, located on sec. 34-29s-29e, last was reported coring ahead to a shale break.

Paloma Attracts New Wildcatting

General Petroleum Corp. has staked location for Benco No. 36-28 test well, slightly less than one-half mile northwesterly from the nearest producer in the Paloma field, on sec. 28-31-26.

On sec. 34, Superior Oil Co. Houchin No. 74-34 has set a string of casing on bottom at 11,817 ft. Top of oil sand was encountered around 11,000 ft.

Superior's Anderson No. 38-35 on sec. 34 is coring at 11,560 ft. Oil sand contact was made at 10,850 ft.

Drill Pipe Stuck in Firebaugh Try

Three miles northeast of the Mendota gas field, Lowry R. Lytle, Burkhart-Greer No. 1 on sec. 35-12s-16e, Madera County, has drill pipe stuck in hole. Total depth presently is 5545 ft.

Core Oil Sand at Jacalitos

Wilshire Annex Oil Co., No. 67-26E on sec. 26-21s-15e in the Jacalitos field cored top of oil sand at 4995 ft. and now is preparing to make formation test. Total depth is 5260 ft.

The Jacalitos Oil Co., Plaugher No. 1 wildcat on sec. 30-21s-16e is reaming at 3050 ft.

SAN JOAQUIN VALLEY WILDCATS

Area	Well	No.	Section	Depth	Status
	Fresno County				
Cantua	Tide Water Assoc. Oil Co., S. P.	82-15	15, 17-15	10073	Fishing
Jacalitos	Jacalitos Oil Co., Plaugher	1	30, 21-16	3050	Drilling
San Joaquin	Standard Oil Co., Griffen	74-18	18, 16-16	4385	Drilling
	Kern County				
Ant Hill	Amerada Pet. Corp., S. P.	23-23	23, 29-29		Rigging up
Antelope Hills	Mohawk Pet. Corp., Layman	1-18	18, 28-20	1210	Testing
Arvin	Richfield Oil Corp., Di Giorgio	3-1	3, 31-29		Location
Canal	The Texas Co., KCL	77-32	32, 29-25	9766	Abandoned
Canfield Ranch	Tide Water Assoc. Oil Co., KCL	82-22	22, 30-26	7825	Swabbing
Devils Den	C.C.M.O. Co., Bates	2	20, 25-19	7628	Drilling
Di Giorgio	Richfield O. Corp., Valley Agriculture	1	7, 31-30		Rigging up
Edison	Richfield Oil Corp., Cauley	43-16	16, 30-29		Rigging up
	Richfield Oil Corp., Lawson-Bennett	1	26, 30-29		Grade
	Rothschild Oil Co., Porter	1	17, 30-29	3525	Drilling
Fairfax	Richfield Oil Corp., Smith	57-1	1, 30-28	4981	Drilling
Gosford	Richfield Oil Corp., Stine-Canal	B-1	21, 30-27		Location
	T.W.A.O. Co., KCL	22-23	23, 30-26		Grade
Jasmine	Rothschild Oil Co., Nunes	1	25, 25-27	1206	Drilling
Kern Front	Richfield Oil Corp., Hood-Bloemer	2	26, 28-27	2322	Testing
Kern River	Wilkern Oil Co., Neebeeker-Landers	1	17, 28-29	982	Bailing
Lost Hills	Harp & Brown, Chandler	1	35, 25-20		Location
	Standard Oil Co., Cahn	58	4, 27-21	8770	Testing
McKittrick	Standard Oil Co., McPhee	2-1	36, 29-21	7665	Testing
	T.W.A.O. Co., Well	64-34	34, 30-22	1681	Drilling
McVan	B & R Oil Co., Poso	1	14, 27-27		Location
	Trico Oil and Gas Co., Keating	3	20, 27-27	2149	Pumping
Mojave	Thos. M. Blake, Cinco	1	22, 31-37	1263	Drilling
	Taylor, Trustie, Roy H. Childs, Well	1	9, 32-38	270	Drilling
Mt. Poso	Tavis, J. J. & Assoc., Well	3	8, 27-28		Location
N. Midway	Sunset Oil Co., Sunset	1A	6, 31-23		Rig
Paloma	Superior Oil Co., Houchin	27-27	27, 31-26		Grade
	Western Gulf Oil Co., L.A. Club	67-6	6, 32-27	11716	Drilling
Premier	Independent Expl. Co., Movious	36	4, 28-28		Grade
	Richfield Oil Corp., Lerdo	1	1, 28-26	3400	Abandoned
	Standard Oil Co., Well	34-5	5, 28-27	7187	Drilling
Race Track Hill	Kern Oil Co., Ltd., Well	28-34	34, 29-29	3716	Drilling
Round Mt.	Bender Drlg. Co., Vedder	14-3	14, 28-28		Location
	Gen. Pet. Corp., Bishop	2	14, 28-28	1835	Drilling
Saco	Gen. Pet. Corp., Kernway	1-44	1, 29-26	5050	Try. to pump
	Gen. Pet. Corp., Kernway	64-1	1, 29-26	4358	Testing
Santiago	Western Gulf Oil Co., Woodward	1	23, 11-23	1149	Drilling
Shark Tooth	United Oil Co., S. P.	1	35, 28-28	3141	Idle
Sheep Springs	Independent Expl. Co., Well	76-A	17, 29-21	3620	Completed
	Trico Oil & Gas Co., Trico	24-2	24, 29-21	4017	Drilling
So. Dome	Los Nietos Prod. & Ref. Co., S. D.	1	13, 25-19		Location
Stockdale	Continental Oil Co., Stockdale	1	9, 30-27		Rigging up
Tejon	Richfield Oil Corp., Evans	1	36, 12-19	5043	Redrilling
	Tejon Oil Co., Tejon	1A	19, 11-19	7229	Drilling
Trico	Grubb, M. T., Opr. Well	2	15, 25-24	11220	Rigging up
Weed Patch	Gen. Pet. Corp., Kernsummer	8-27	27, 30-28	7224	Drilling
W. Mt. View	Richfield Oil Corp., W. Mt. View	A-26-15	15, 30-28	4767	Drilling
W. Ring	Independ. Expl. Co., Lambert Lands	1	35, 26-27		Location
Wheeler Ridge	Richfield Oil Corp., Wildflower	1	12, 10-20		Rig
	Kings County				
Pyramid Hills	Pyramid Prod. Co., Spreckles	1	16, 24-18	4214	Idle
Reef Ridge	Shell Oil Co., Crow	41-2	2, 23-16	6905	Drilling
Tulare Lake	Magee, H. H., Von Glahn	17-1	17, 23-22		Rig
	Madera County				
Madera	Lytle, Lowery R., Burkhart-Greer	1	31, 12-16	5600	Fishing
	San Luis Obispo County				
Cholame	K & M Drilling Co., Kosanke	1	17, 25-16	710	Idle
Cuyama Co.	Norris, Halvern L., Cuyama	1	25, 11-18	915	Drilling
Midway	Richfield Oil Corp., Temblor Hills	1-1	36, 31-21	8158	Idle
Shandon	Tutin & Twisselmann, White	1	5, 26-15	3496	Idle
Temblor Hills	Richfield Oil Corp., & Sun Oil Co., Gonyer Unit	1	36, 12-25	622	Drilling

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Three Trying Mojave Area

In the Mojave area of Kern County, Thomas M. Blake, Cinco No. 1 on sec. 22-31s-37e is drilling in hard sandstone at 1263 ft. Roy H. Taylor, Trustee, Childe-Well No. 1 on sec. 9-32s-38e has spudded and now is drilling in surface formations. T. L. Parks (P. & H. Oil Co.,) Dove No. 1 on sec. 25-31s-37e is still a location only.

Richfield Stakes Gosford Wildcat

Approximately six miles east of Ten Section field, Richfield Oil Corp. has staked location for a new wildcat in the Gosford area on sec. 21-30s-27e. It will be known as K.C.L. Stine Canal No. B-1.

Lost Hills Job Undergoing Trials

Standard Oil Co. is preparing another trial on its Cahn No. 58-4 deep test on sec. 4-27-21 in the Lost Hills field. The total depth of the well is 8770 ft. and oil sand top at 8650 ft. Packer will be set at 8707 ft. to exclude the upper part of the zone in the new trial.

The original objective of the present undertaking was Eocene formation, but the opinion generally prevails that the zone now being questioned is lower Miocene.

Surrounding acreage, in addition to Standard, is held by General Petroleum, Richfield and Universal Consolidated.

Seaboard Scores Raisin City Producer

Seaboard Oil Co. has completed its No. 67-13 well on sec. 13-15s-17e in the Raisin City field from 5024 ft. It was good for 160 barrels of oil daily.

Crews have moved over to start the drill on No. 47-13 on the same lease.

DiGiorgio Prospector Making Boring Ahead

In an area where a number of previous wildcats have bit nothing but dust, Richfield Oil Corp. is drilling Valley Agriculture No. 1 on sec. 7-31s-30e, on ground owned by the DiGiorgio interests, at 1100 ft.

This is the company's third wildcat in the area.

Two Start at Midway-Sunset

Lodico Oil Co. is grading location for Birch No. 1 on sec. 7-11-23 in the Midway-Sunset field. Copa Oil Co., in the meantime, is preparing to drill Westside No. 3 on sec. 8, same township.

Hancock Enters Fairfax Area

Hancock Oil Co. will drill a well in the Fairfax area of Kern County. The well site selected falls one location east of the J. I. Listle producer on sec. 12-30-28.

On sec. 1-30-28, Richfield Oil Corp., Smith No. 57-1 cored to 5094 ft. in gray sand and is running an electric log.

Drilling Deeper in San Joaquin Project

Eight miles west of the Helm field in Fresno County, Standard Oil Co. has reached a depth of 4400 ft. in its Giffen No. 74-18 wildcat on sec. 18-16s-16e in the San Joaquin area. The well probably will go to at least 8000 ft.

General Drilling Co.

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THIS LAUGH OFF!!

A lot of auto wrecks result from the driver hugging the wrong curve.

The way to tell a city girl from a country girl is to watch 'em in a high wind. The city girl will grab her hat and the country girl will grab her skirt.

Did you ever wonder how many fig leaves Eve tried before she said: "I'll take this one?"

If girls only knew it, men like the shy, demure type—the sort you have to whistle at twice.

If some women's hindsight was as good as their foresight, they wouldn't think of wearing slacks.

"It was my fault," admitted the lady motorist after the accident. "I was driving on the wrong side of the street."

"No, madam," said her gallant victim. "The fault was mine. I saw you coming blocks away and had ample time to dodge down a side street."

"Well, Mary, now that we've struck oil, I want you to have some decent clothes."

"Bill Jones, I've worn decent clothes all my life. Now I'm going to dress like other women."

Rastus (throwing down four aces): There, guess I won this old pot, all right.

Sambo (angrily): You play this game honest boy; play it honest! I know what cards I dealt you!

"Do you know what good clean fun is?"

"No, what good is it?"

Hickory Dickory Dock
The mice ran up the clock,
The clock struck one . . .
A lot of mice have been killed that way.

"Where is Private Smith?"
"A. W. O. L."
"Meaning what?"
"After women or liquor."

"This girl is fresh from the country and it's up to us to show her the difference between right and wrong."

"Okay, you show her what's right."

"Sorry, Soldier, but I never go out with perfect strangers."

"That's okay, Babe. I ain't perfect."

"What kind of oil do you use in your car?"

"Oh, I usually begin by telling them how lonely I am."

"Halt! Who goes there?"
"Friend, with bottle."
"Pass, friend. Halt, bottle!"

Sizmo Sam's been reading history . . . he has discovered that in the days of Queen Elizabeth some of the ladies of the Court liked to curl up with a book, while others preferred to curl up with some of the pages.

"Yes . . . it certainly takes real guts to be in that racket," said the cat watching the tennis match.

I had sworn to be a bachelor,
She had sworn to be a bride;
But I guess you know the answer,
She had nature on her side.

Say it with flowers, say it with sweets,
Say it with kisses, say it with eats,
Say it with jewelry, say it with drink,
But never, oh never, say it with ink.

Whatever trouble Adam had,
No man in days of yore
Could say when Adam told a joke:
"I've heard that one before."

"I hear you and the leading lady are on the outs."

Electrician: "Yea, it was one of those quick change scenes with the stage all dark. She asked for her tights and I thought she said lights!"

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Many California producers consider the JENSEN Unit the best thing yet devised for lifting oil. The first cost is low. Installation is easy. The unit operates so smoothly that other equipment gives better service too.

We'd be ashamed if a JENSEN Unit were not likely to make any well more profitable and satisfactory. We've had more than 25 years in which to find out how to make pumping equipment, and we've had constant help from many successful producers.

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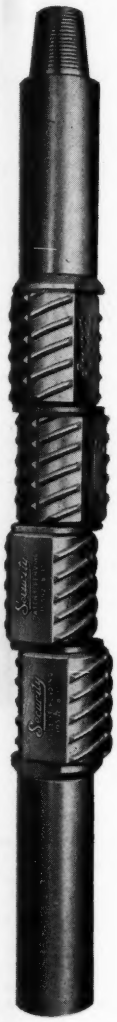
Security Casing Scraper



Security Engineering Co., Inc., Whittier, California, announces a new casing scraper designed to fill the need for a tool that thoroughly cleans the inside of pipe whether new or old. It operates on the same slicing action principle as the Sievers Reamer; and according to the manufacturer, it only takes 200 turns to clean the dirtiest pipe and prepare it for free passage of production tools. Especially valuable for taking burrs off gun perforations, the Security Casing Scraper is also recommended for thoroughly cleaning cement, scale, corrosion, paraffin and all kinds of material from the inside walls of casings.

The unique design of this tool offers several distinctive features. Square mandrels with reversible scrapers greatly lengthen the tool's life and reduce operating costs. Each scraper with its hardened cutting thread is subjected to controllable spring pressure, thereby providing uniform wall contact under all conditions. This use of a number of strong coil springs permits size adjusting up to full casing diameter.

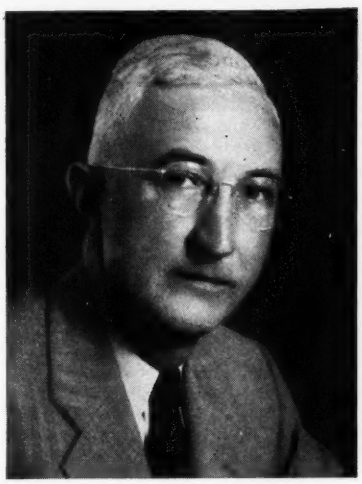
Tejon "Cat" Below 7700 Ft.

Tejon Oil Co., No. 1A on sec. 19-11n-19w in the Tejon area is making hole through hard shale, streaked with sand below 7700 ft. Formation test of the interval of 6812-6920 ft., recovered 200 ft. of mud.

BUY WAR BONDS

Merritt Elected V. P. of Byron Jackson Co.

Floyd C. Merritt, long identified with the production phases of the oil industry, was elected a Vice President of Byron Jackson Co. at a recent meeting of the company's directors.



FLOYD C. MERRITT
Vice President, Byron Jackson Co.

Mr. Merritt, a 1910 graduate of Stanford University, majored in geology, and in 1912 made the first exploration of Venezuela's Maracaibo basin. During the succeeding ten years he served as a geological consultant in many fields of the Western Hemisphere.

On January 1st, 1922, he joined J. E. (Brick) Elliott in the formation of the Elliott Core Drilling Co. serving as Vice President and General Manager until its acquisition by Byron Jackson Co. in 1939. Transferring to the latter company he served as works manager of the Oil Tool Division and in other important executive capacities until his recent elevation to a Vice Presidency.

Buena Vista Hills Active

Currently, there are no less than 30 drilling jobs at various stages of operation in the Buena Vista Hills. Wells most recently completed include Union Oil Co., McLeod No. 376; Standard Oil Co., No. 306-36B; Tide Water Associated Oil Co., No. 78 K-8..; and North American Oil Consolidated, No. 67 and 72. All were substantial producers.

George T. Horton Dies Suddenly

Mr. George T. Horton, President of Chicago Bridge & Iron Company, died suddenly March 19th, 1945. Mr. Horton had been associated with the Company, founded by his father, Horace E. Horton, since he was graduated from R. P. I. in 1893 and served as its President since his father's death in 1912.

Mr. Horton was noted as an Engineer and many of the Company's designs were developed by him.

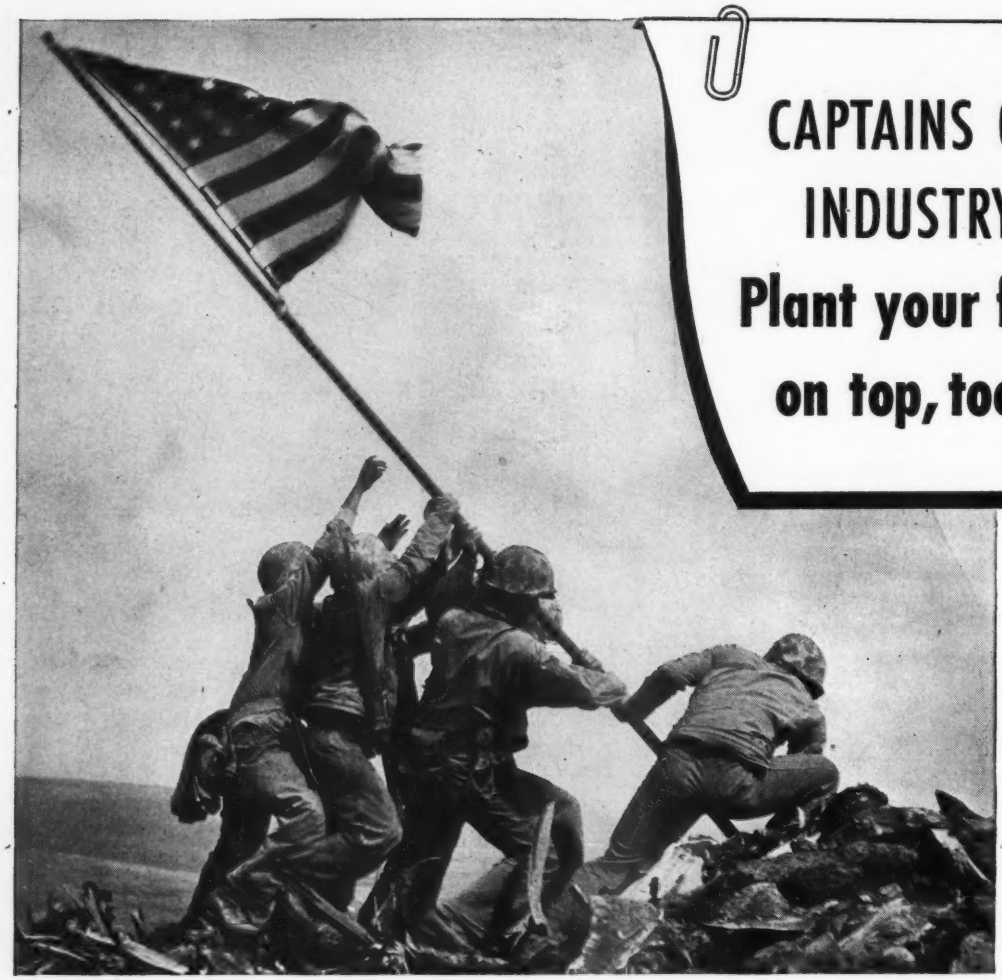
Mr. Horton served as an Alumni Trustee of R. P. I. from 1925 to 1928 and had been a Life Trustee since 1929. He was an honorary member of the Western Society of Engineers and the Chicago Engineers Club and participated in the activities of the American Welding Society, serving as its president in 1939-40. Other engineering affiliations include: American Society of Civil Engineers, American Society for Testing Materials, Society of Naval Architects and Marine Engineers, American Petroleum Institute, and Engineers Club of New York.

"Here Is Why" Folder Explains Wartime Problems

Successfully meeting the common problem of informing customers of the reasons why deliveries are slower than pre-war and creating a better understanding of the problems faced by the company, has been done by Western Gear Works with plants at Seattle, San Francisco and Los Angeles.

The firm recently issued a four-page, two-color folder titled "Here Is Why" which does an unusually effective job of telling customers the reasons why pre-war service is not possible. It explains the "special assignment" work being done on high priority aircraft, marine and ordnance material. Straightforward, sincere copy is cleverly illustrated by cartoons.

A copy of the folder may be had by writing to Wayne D. Hadley, Public Relations and Advertising Manager, at Western Gear Works, Seattle 4.



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This year we've got to make 2=3!

This year we've got to make 2=3! We've got to lend Uncle Sam in 2 chunks almost as much as we lent last year in 3. Which means that, in the approaching 7th War Loan, each of us is expected to buy a BIGGER share of extra bonds.

The 27 million smart Americans on the Payroll Savings Plan are getting a headstart! Starting right now they are boosting their allotments for April, May and June—so that they can buy *more* bonds, and spread their buying over *more* pay checks.

Our Marines went over-the-top at Iwo Jima in the greatest, and hardest, battle in the Corps' history. Now it's *your* turn! Your quota in the 7th is needed to help finish this war, sidetrack inflation, build prosperity. So, captains of industry, plant your flag on top—like the Marines at Iwo Jima!

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CAPTAINS of INDUSTRY—here's your *Check List* for a successful plant drive:

- ★ **Get your copy of the "7th War Loan Company Quotas" from your local War Finance Chairman. Study it!**
- ★ **Determine *your* quota in E Bonds — the backbone of every War Loan.**
- ★ **Arrange for plant-wide showings of "Mr. & Mrs. America"—the new Treasury film.**
- ★ **Distribute "How to Get There"—a new War Finance Division booklet explaining the benefits of War Bonds.**
- ★ **Circulate envelopes for keeping bonds safe.**
- ★ **Display 7th War Loan posters at strategic points.**
- ★ **And—see that a bench-to-bench, office-to-office 7th War Loan canvass is made.**

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The Treasury Department acknowledges with appreciation the publication of this message by

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